

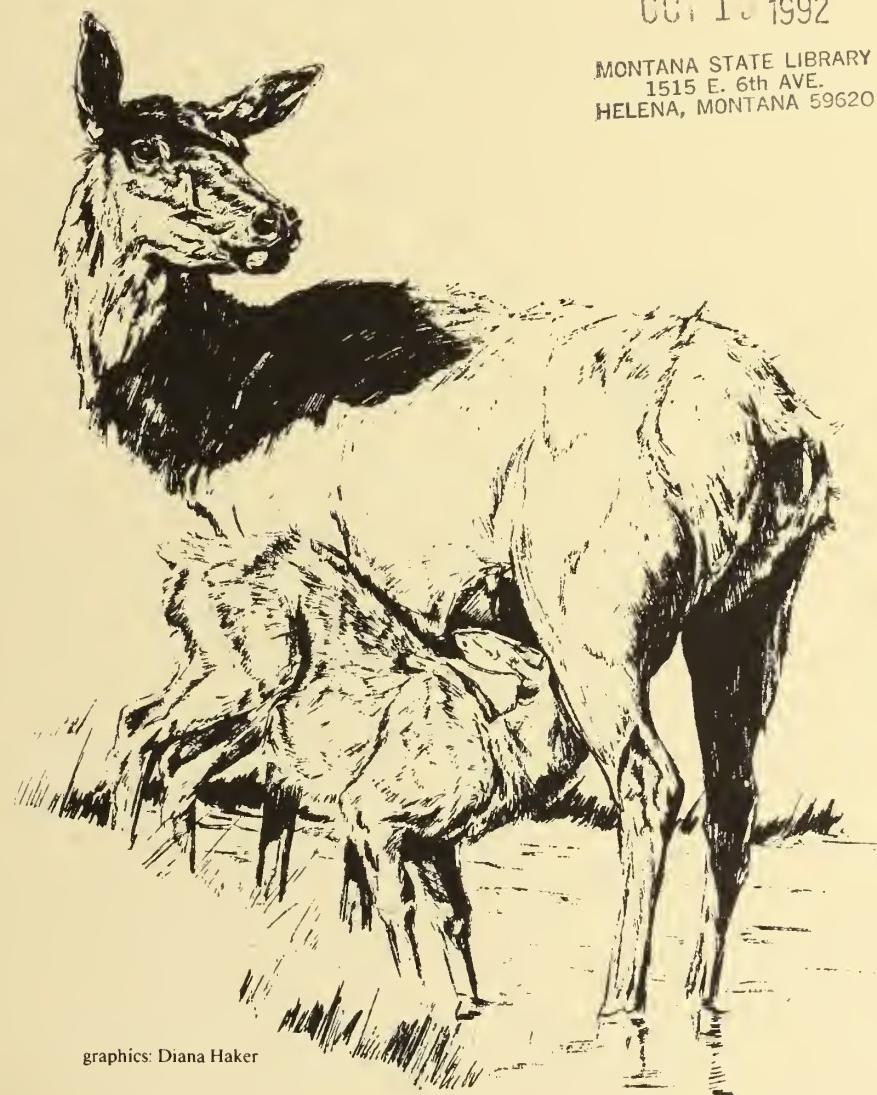
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Statewide elk management plan for Montana



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**STATEWIDE ELK MANAGEMENT PLAN
FOR MONTANA**

Montana Department of Fish, Wildlife and Parks

Wildlife Division

1420 East Sixth Avenue, Helena, MT 59620

Compiled by Heidi B. Youmans

**Approved by the
Montana Fish, Wildlife and Parks Commission**

January 1992



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STATEWIDE ELK MANAGEMENT PLAN

ACKNOWLEDGMENTS

This statewide elk management plan represents the work of a great many people throughout Montana. The planning effort was initiated and coordinated by the Fish, Wildlife and Parks Commission and administrative staff of the Montana Department of Fish, Wildlife and Parks (hereafter referred to as DFWP). The plan itself was formulated by DFWP personnel involved at all levels of elk management. The plan also addresses issues brought forth by citizens and by personnel of other state and federal agencies.

PUBLIC PARTICIPATION

Public participation was encouraged throughout the planning process. Information and comments were exchanged at public meetings, open house sessions, informal meetings with concerned interest groups (hunting clubs, landowner organizations, guide and outfitter groups, industry representatives, etc.) and meetings with representatives of state and federal land management agencies. Public opinion was further solicited via questionnaires and a 10-week public review of a draft of the plan. DFWP issued press releases and informational brochures to keep the public informed of the planning process.

Public input focused primarily on the following eight issues:

- Management of elk habitats (on public and private lands)
- Elk population levels (How many elk should we have?)
- Elk distribution (Where should we have elk? What areas are not suitable for habitation by elk?)
- Hunting season regulations (as they affect an individual's opportunity to hunt elk and choose what kind of animal to harvest)
- Game damage (What should be done to prevent and/or mitigate elk depredation?)
- Public access (overcrowding, restrictions on hunting access and motorized access and the pros and cons of road closures)
- Resource conflicts (how to address perceived conflicts between elk habitat requirements and other land uses such as timber harvest, mining and livestock grazing)
- Competition for elk hunting opportunity - particularly for mature bulls (issues surrounding length and timing of archery season versus the general season, limited entry hunting, access, landowner preference for special permits, use of A-7 (antlerless-only) licenses, hunting opportunity for residents versus nonresidents and for guided versus unguided hunters)

A summary of issues raised during public review of the draft elk plan is presented on page 157 - 162.

INTRODUCTION

Historically, elk were abundant in eastern, central and southwest Montana according to early records. Elk were extirpated from eastern Montana prior to the turn of the century. By the early 1900s all that remained of once vast elk populations were small herds inhabiting mountainous terrain along the Continental Divide and in and around Yellowstone National Park. Several factors contributed to expansion of elk numbers and distribution including expansive habitat changes brought about by huge forest fires and logging activities in the mountains and foothills of western Montana, transplants of elk from Yellowstone Park beginning in 1910 and institution of hunting season closures in 1913. By 1915 the state's elk population exceeded 37,000. Montana today supports a wintering population of about 90,600 elk and is nationally known as a premiere elk state.

The complexities of managing elk populations at levels compatible with other land uses and growing concern about Montana's ability to meet current and future public demand for hunting recreation have accentuated the need for a more comprehensive, statewide approach to elk management. Although DFWP has operated under an elk plan since 1978, this 1992 elk plan differs from previous plans in two significant ways: 1) greater planning detail at the local elk management unit (EMU) level, and 2) greater public involvement in the planning process.

A two-tiered planning process initiated in 1988 culminated in a statewide plan and 35 individual EMU plans. The statewide portion of the plan sets direction for management of the state's elk resource in the form of statewide goals, objectives, management strategies and management guidelines. Under the "umbrella" of the statewide plan, each of 35 EMU plans outlines management objectives and strategies specific to local habitat and elk population characteristics and land ownership patterns. Each EMU encompasses one or more hunting districts (delineated in Montana's big game hunting regulations) that share similar ecological characteristics and, in most cases, encompasses the yearlong range of major elk populations inhabiting the EMU.

This plan was formulated with the intention of providing guidance to wildlife managers, land managers and parties responsible for planning and policy decisions that affect wildlife resources and wildlife-related recreation in Montana. It will be used by DFWP personnel to prioritize field activities, manage time and budgets, formulate elk management recommendations and coordinate with personnel of other state and federal agencies. In the hands of entities charged with making management and policy decisions, the elk plan can facilitate consideration of local and statewide management objectives for elk populations, elk habitats and public recreation. The elk plan will serve as DFWP input to planning processes conducted by other resource management agencies and provide a framework for interagency coordination at all levels. Although the elk plan will serve as a source of information to the Fish, Wildlife and Parks Commission, it does not preempt Commission authority to formulate annual rules, set hunting season regulations or implement emergency actions in response to unexpected events or circumstances.

Through annual updating, DFWP intends to maintain this document as a current and complete source of information on the state's elk populations and their management for at least five years.

MISSION

The Montana Department of Fish, Wildlife and Parks, through its employees and citizen commission, provides for the stewardship of the fish, wildlife, parks and recreational resources of Montana, while contributing to the quality of life for present and future generations.

Integral to DFWP's mission are the following goals:

- Manage with a focus on ecological systems to reflect the diversity of all wildlife and their habitats, while maintaining our commitment to Montana's hunting and fishing heritage.
- Provide increased opportunities for public enjoyment of fish, wildlife and parks resources, while maintaining our commitment to improve landowner/sportsperson relations.
- Elevate the importance of public education and participation in all program areas to afford citizens the opportunity to better understand, appreciate and make informed decisions about our natural and cultural resources.

Goals, objectives and strategies outlined in the elk plan were formulated to advance the DFWP mission with emphasis on:

- Perpetuating and managing elk populations for public benefit.
- Promoting conservation of habitats that support the state's elk populations.
- Providing the public with elk-related recreational opportunity and promoting habitat conditions required to maintain elk hunting opportunity and a diversity of elk hunting experiences.
- Developing solutions to wildlife conflicts on private and public lands.
- Informing and involving the public in planning future management of Montana's wildlife resources.

ELK HABITAT

The term "habitat" refers to the kind of place that supports an animal or a population because it supplies the animal's basic requirements: food, water, shelter, living space and some level of security. The availability, distribution, interspersion and condition of elk habitat components ultimately determine the numbers of elk that an area can produce and sustain and the kinds and amount of public recreation that elk populations can provide. Habitat management goals are also influenced by other land uses occurring in elk habitats.

DFWP Approach: In recognition of the fundamental role of elk habitat in producing and sustaining elk populations and perpetuating current levels of elk-related public recreation, elk habitat must be the primary emphasis of DFWP's elk management program. Due to the fact that habitat conditions at any particular site are dynamic over time, DFWP habitat efforts will be directed to maintaining elk habitat components on a landscape basis. To this end, DFWP will coordinate with and provide assistance to public and private land managers in the design and implementation of land management practices that maintain or enhance elk habitats, with emphasis on the following habitat requirements.

Nutrition: Elk enter the spring season in a weakened condition, with their fat reserves exhausted. Succulent, spring plant growth is critical to beginning recuperation from the rigors of winter. Cow elk must begin improving body condition to enable them to provide adequate nourishment to newborn calves. Adequate vegetation cover in which to hide newborn calves from predators is also an important attribute of spring range. In the case of migratory elk herds, important spring ranges are located along an elevational gradient between valley floors and higher elevation summer ranges.

Habitats favored during summer months are mesic (moist) parks, meadows and riparian areas offering succulent, nutritious forage, primarily broad-leaved plants. Elk are drawn to these moist areas for both foraging and bedding, spending the summer building body condition and accumulating winter energy stores in the form of fat. The nutritional value of summer forage is particularly important to cows in maintaining the energy demands of lactation, to calves in maintaining growth rates and to bulls for antler growth. Because winter survival is largely dependent on fat reserves at the onset of winter, summer range conditions are just as important to the maintenance of elk populations as are winter range conditions.

Elk enter the fall season in near peak body condition. Succulent vegetation found in parks and meadows associated with secure timber stands is important to elk during fall, allowing them to offset energy expended during the rut and continue to accumulate fat for vital winter energy reserves. Good forage conditions in secure migration corridors and fall staging areas are also important, allowing elk to maintain body condition during hunting season and during the period they migrate from summer to winter ranges.

Winter is the most difficult season for elk. An elk spends the greater part of the year recuperating from one winter and preparing to survive the next. Not only is less forage available during winter, but its accessibility (due to snow cover), palatability, nutritional value and digestibility are all at minimum levels. The challenge facing elk in winter is to conserve energy to the extent possible while maintaining food intake levels adequate to maintain body temperature. To meet winter energy demands, elk must utilize fat reserves to supplement their diet, which can result in a 20-25% loss in body weight for an adult.

Winter Range: Most Montana elk populations are migratory. They are widely dispersed from spring through fall but congregate in winter on traditional winter ranges comprising small but critical portions of their yearlong range. Elk are traditional and selective in the way they use winter range. Therefore, the availability of traditional winter ranges and conditions on those winter ranges are of paramount importance.

Elk requirements during the winter include the presence and accessibility of palatable forage, plus topographic and thermal cover conditions conducive to energy conservation behaviors. The key attributes of elk winter range that promote forage accessibility are south or southwest exposures that accelerate snow melt, and prevailing winds that prevent snow from accumulating. Timber cover on elk winter ranges is important in providing thermal protection and areas of relatively shallow snow that enable elk to escape from predators and avoid other disturbances with minimal energy expenditure. Topographic

relief also aids thermal regulation by providing protection from direct exposure to wind as well as the opportunity to take advantage of temperature inversions. Steep slopes provide favorable conditions for resting elk to absorb daytime solar radiation and vantage points from which bedded elk can detect and escape from predators and other sources of disturbance.

Although winter range quality is important to elk populations, winter survival is also influenced to a great extent by body condition at the onset of winter (indicative of summer range conditions). Most vulnerable to severe winter conditions are calves, which must continue to grow and develop despite adverse conditions, and older bulls, which enter winter in poor condition after the rigors of rutting season.

Thermal Cover: Elk are homeothermic, meaning they must maintain a relatively constant body temperature. Thermal cover is a feature of habitat that affords protection from weather and temperature extremes during all seasons of the year. High temperatures prompt elk to seek cool, moist, shaded areas. During summer, mature forest stands with "natural pruning" of lower branches offer shade, cooling wind action and good visibility for bedded elk. In winter, thermal cover is provided by evergreen conifer stands that absorb and retain solar radiation and provide insulation from radiant loss of body heat. Timber stands with closed or continuous canopies are superior to open or partially open canopies in absorbing solar radiation, and tall crowns have better insulating capabilities than short crowns. Understory vegetation in timber stands can enhance the quality of thermal cover by providing a windbreak. Topography can also provide effective thermal cover by sheltering elk from direct exposure to wind. The importance of thermal cover in winter is inversely related to forage availability, palatability and nutritional value. Thermal cover is therefore most critical to elk inhabiting areas where winter forage is limited. Likewise, elk can survive with minimal thermal cover in situations where adequate forage is available and disturbance is minimal.

Daytime solar exposure and presence of shrubs to provide nighttime thermal cover are thought to be important factors affecting survival of newborn elk calves. Shrub cover is therefore considered an important attribute of spring ranges used by elk during the calving period.

Security: The term elk "security" refers to the protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with hunting season or other human activities. The components of security may include, but are not limited to topographic relief, vegetation density, road density, distance from roads, extent of area and size of vegetation blocks, hunter density, timing and length of hunting season and land ownership. Security is especially important to elk during winter (to maximize energy conservation) and hunting season. While not among the strictly biological requirements for survival, security is essential to wildlife populations subject to predation or hunting.

Security areas, because of geography, topography, vegetation, remoteness or any combination thereof, will hold elk during periods of disturbance. These areas are characterized by sizable and contiguous blocks of habitat that limit human access by

virtue of vegetation density, rugged topography and/or limited road access. Ideal security areas in mountainous terrain are often characterized by a mature overstory, a seedling/sapling understory and the presence of downfall. This kind of protection is not provided by intensively managed forests characterized by commercial thinning and the presence of roads. During the rut, dense timber provides important security for bulls. Of critical importance during hunting season are secure migration corridors linking summer areas and winter ranges. Bull elk are particularly vulnerable to hunting pressure as they travel toward winter ranges.

Abandonment of traditional seasonal range use patterns and travel corridors or overharvest of older age classes of bulls may indicate loss of elk security. In the absence of adequate security, hunting pressure can prompt elk to abandon traditional fall ranges in favor of places offering better security, or areas where hunting is restricted or prohibited. In some locations, loss of elk security can be partially mitigated by reductions in hunting pressure (limited entry hunting regulations) or access restrictions, including road closures. Emphasis on maintaining fall security areas and secure migration corridors is essential to meeting statewide demands for public hunting opportunity, maintaining a variety of recreational experiences and maintaining a diverse bull age structure.

MANAGEMENT OF ELK HABITATS, ELK POPULATIONS, AND ELK VULNERABILITY

Yearlong ranges of migratory elk herds may encompass lands administered by a multitude of state and federal land management agencies and private and corporate land managers. Some herd ranges also extend into neighboring states and provinces. Issues concerning management of elk habitats, conflicts with other resource uses, game damage, hunting access (on both public and private lands) and competition for elk hunting opportunity can therefore be very complicated.

Management of elk habitats on public lands is the domain of state and federal land management agencies, specifically the U. S. Forest Service (USFS), Bureau of Land Management (BLM), U. S. Fish and Wildlife Service (USFWS) and Montana Department of State Lands (DSL). The respective missions of these agencies address management of wildlife habitats within the context of multiple use of public lands. Management of elk habitats on private lands is the prerogative of private landowners.

Management of elk populations in Montana is the responsibility of DFWP. The mission of DFWP has focused on managing and perpetuating wildlife populations and providing wildlife-related public recreation. Thus, wildlife managers have concentrated on designing and enforcing hunting regulations that satisfy public expectations for hunting recreation and also achieve desired postseason population levels and biologically sound sex and age composition. DFWP is directly involved in management of elk habitats only on DFWP-administered Wildlife Management Areas (WMAs) and private and public lands included in cooperative habitat management programs.

Despite differences in their respective agency missions and areas of management emphasis, DFWP and land management agencies share responsibility for management of public wildlife resources, wildlife habitats and wildlife-related public recreation. The complexities of managing elk populations and elk habitats have escalated substantially during the past two decades. Equally fundamental to elk management, and the greater challenge to resource managers, is management of elk vulnerability. Elk vulnerability is a measure of an elk's susceptibility to being killed during hunting season. Vulnerability and security are inversely related: as elk security declines, elk vulnerability increases. Cooperative management of the following biological and social parameters is prerequisite to managing elk vulnerability.

- Security levels
 - Size/extent of security areas and migration corridors and their locations relative to other habitat components
 - Vegetation (type, structure, amount and density)
 - Size and juxtaposition of vegetation blocks
 - Road density (extent of fragmentation of secure areas)
 - Distance from roads and trails (ease of human accessibility)
- Hunting pressure
 - Days of hunting recreation (numbers of hunters afield, hunter densities)
 - Timing and length of hunting season as it affects distribution of hunting pressure. Elk are most vulnerable during the rut and with the onset of snow accumulations that force them onto low elevation winter ranges that are easily accessible to hunters.
 - Road and trail access as they affect elk distribution and hunter numbers and distribution. Road closures and vehicle restrictions can be used to reduce elk vulnerability by: 1) Protecting the integrity of key security areas needed by elk between the time they leave summer ranges and arrive on winter ranges, and 2) Protecting security levels in migration corridors between summer and winter ranges. Likewise, road closures and vehicle restrictions can be used to regulate elk vulnerability and elk harvest by: 1) Encouraging elk to remain in low security areas they would otherwise abandon due to traffic disturbance and/or excessive hunter densities, and 2) Discouraging elk from abandoning low security areas in favor of parcels of privately owned lands where hunting is limited or prohibited.
 - Hunter access to private lands: levels of hunting pressure and subsequent effects on elk distribution. In the absence of hunting pressure, private lands may draw elk from nearby low security areas (both public and private lands). In such circumstances, elk distribution on private lands during the hunting season may be regulated through application of hunting pressure. Private lands offering good elk security and limited hunting pressure may provide a refuge for significant numbers of bulls with the potential to enhance survival of mature bulls through the hunting season.
 - Hunting regulations (including bag limits and restrictions on sex and age of animals that can be legally harvested)

Hunter behavior and technology (including increasing motorization, sophisticated calls and technological advances that increase the effectiveness of hunting weapons)

Perpetuation of current levels of recreational opportunity and hunting experiences traditional in Montana are contingent on cooperative management of the aforementioned components of elk vulnerability, particularly as hunter numbers increase. Management of elk vulnerability is also fundamental to maintaining the "fair chase" aspect of sport hunting that is traditional in Montana. Adjusting the length and timing of the hunting season and/or limiting the number of hunters afield through changes in hunting regulations are obvious ways to help control elk vulnerability. In other western states, reductions in elk security and concurrent increases in elk vulnerability have prompted substantial reductions in public hunting opportunity (hunting seasons shorter than one week, limited-entry public hunting, assigned hunting period, mandatory choose-your-weapon requirements, etc.). Montana's hunting public has made it clear to DFWP that these options are unacceptable at this time. Therefore, DFWP will focus on management options that maintain healthy elk populations without reducing existing levels of hunting opportunity. Although either-sex hunting opportunity has been reduced 92% since 1963 to control vulnerability of the female segment of elk populations, Montana residents still have the opportunity to purchase an elk hunting license every year and participate in a five-week general hunting season. In addition, elk hunting recreation is available to 17,000 nonresident hunters who visit the state each year to hunt big game.

The Elk Vulnerability Working Group, comprised of wildlife professionals representing Montana, Idaho, federal, university and private interests was formed in 1989 to address the issue of elk vulnerability. An April, 1990 workshop sponsored by this group resulted in recommended language to define the problem of elk vulnerability (refer to glossary, page 152). This group also sponsored an elk vulnerability symposium in Bozeman, Montana, in 1991, which brought together biologists, administrators and educators from the U.S. and Canada to discuss the issue of elk vulnerability and methodologies for monitoring and managing elk vulnerability. DFWP supports the efforts of this broad-based group and welcomes new concepts that will advance interagency cooperation in approaching this difficult challenge.

ARTIFICIAL FEEDING

DFWP Position: The DFWP elk management program will emphasize protection and enhancement of habitats crucial to the yearlong maintenance of free-ranging elk herds sustained by natural forage. Because of the negative impacts of artificial feeding on soils, vegetation and wildlife populations, DFWP will actively discourage supplemental feeding by public entities or private individuals.

Severe winter weather puts stress on wildlife populations and in extreme circumstances, may generate public interest in supplemental feeding. Artificial feeding of elk and other ungulates is at best only a short-term "fix", and at worst can have serious long-term consequences. The following negative impacts of artificial feeding are of primary concern to DFWP:

- Artificial concentration of wild animals in a confined feeding area promotes destruction of natural vegetation communities and soil erosion. Such habitat damage results in long-term negative impacts to the condition and productivity of the site and to other wildlife populations in the feeding area.
- Artificial feeding can promote a long-term dependency on feed yards, which can delay or diminish migration to traditional winter ranges.
- Supplemental feeding may prolong artificially high wildlife populations, which will ultimately "crash" if feeding is interrupted. Because of the social and political ramifications of such an outcome, implementation of an artificial feeding program invariably becomes a long-term obligation, even if it is later determined that such a program is not in the best interest of the targeted wildlife population.
- Artificial feeding can cause elk to become so habituated to a hay diet that they seek out hay yards, resulting in depredation and economic hardship to farmers and ranchers.
- Artificial feeding is very costly, requiring expenditure of funds which could be used more effectively to maintain or enhance important habitat for the long-term benefit of wildlife populations.
- To be effective, artificial feeding must be initiated before elk experience nutritional stress to allow rumen digestive organisms to successfully adapt to a change in diet. Feeding must then be continued until spring, regardless of winter severity, to maintain effective rumen digestive processes.
- Artificial concentration of large numbers of animals in a confined area promotes the outbreak and transmission of disease. For example, the incidence of brucellosis in the portion of the Yellowstone elk herd that winters on Wyoming's elk feeding grounds is as high as 50%, while the portion that winters on a natural diet in Montana has a brucellosis infection rate of less than 1.5%.

ELK RESEARCH

Elk research has expanded knowledge of elk populations and habitat requirements. Early research yielded information on distribution and movements, food habits, winter ranges and calving areas, reproductive rates, disease occurrence and a method for determining an elk's age from tooth wear patterns. With the advent of biotelemetry equipment, biologists can now delineate yearlong herd ranges and migration corridors used by many of the state's elk herds. As a result, it is possible to apply separate management strategies to resident and migratory elk herds that occupy the same winter range. In addition, it is possible to monitor elk use of specific habitats and the response of elk populations to various land-use activities, such as logging, grazing, mining and recreational development. Such information helps land managers incorporate elk habitat requirements in land-use decisions and minimize the potential for resource conflicts.

As of 1992, the two major elk research projects underway in Montana are:

- A study in southwest Montana designed to evaluate the effects of several harvest regulations on elk herd productivity.

- A study in west-central Montana designed to develop an elk census methodology, determine elk security needs and investigate habitat partitioning by deer and elk populations that coexist in the same area.

Other, smaller-scale efforts currently underway across the state are geared primarily to addressing local management problems.

Future DFWP research efforts will:

- Develop methods to improve population monitoring capabilities in heavily forested habitats.
- Evaluate the impacts of burning sagebrush on transitional elk range.
- Investigate interactions between elk and mule deer populations, particularly in locations characterized by increasing elk numbers and declining deer numbers.

In addition, two existing data bases (biological specimens and measurements from Yellowstone National Park and blood samples from several other elk populations) will be analyzed. Screening of blood and tissues for diseases will continue in conjunction with projects requiring capture and release of live elk.

ELK, ECONOMICS AND COMMERCE

In addition to its cultural, aesthetic, social and ecological values, Montana's elk resource is a substantial asset to the state's economy. An economic survey conducted in 1985 by DFWP, in cooperation with the Bureau of Land Management and the U.S. Forest Service, determined that resident and nonresident hunters contribute \$58.4 million per year to Montana's economy in the form of transportation, lodging, food, guide fees and other expenditures associated with elk hunting. This figure does not include purchase of elk hunting licenses.

A 1990 study conducted by Bioeconomics Associates of Missoula, DFWP and USFS, determined that wildlife viewing annually contributes more than \$44 million to Montana's economy, with 70% of that amount generated by the 296,000 nonresidents who visit Montana each year for the primary purpose of viewing wildlife. Although the proportion of the wildlife viewing economy directly attributable to elk is believed to be substantial, it has not been quantified.

Commercial enterprises that benefit from Montana's elk populations include the guiding and outfitting industry and businesses throughout the state that are patronized by people pursuing elk-related recreation. In 1987 the Montana Legislature made special provisions for guides and outfitters by reserving a portion of the nonresident elk and deer license quotas for exclusive use by clients of licensed outfitters (5,600 of the 17,000 nonresident big game combination licenses and 2,000 of 6,000 deer combination licenses). The Montana Department of Commerce does not limit the number of guides and outfitters that are licensed to operate in the state. However, the USFS does regulate outfitter numbers and special use permits for individual national forests.

Commercialization of wildlife resources has fueled a number of controversies pertaining to Montana's elk management program. While remaining unresolved, the following issues have been addressed or accommodated to some extent in formulation of the elk plan:

- The trend toward leasing of trespass and hunting rights on privately-owned lands; a corresponding decline in public hunting opportunities on private lands; and the increasing difficulty and effectiveness of using hunter harvest to manage elk numbers on private lands due to hunting restrictions (often resulting in escalating game damage problems on and adjacent to lands where elk harvest levels are inadequate).
- Increasing competition between outfitters and between guided and non-guided elk hunters for elk hunting opportunity, especially for mature bulls.
- Whether and to what extent the guiding and outfitting industry should be regulated; and whether or not DFWP should have a role in future regulation.
- Increased interest and growth in the game farming industry and associated threats to the state's elk populations, most notably introduction/transmission of diseases and parasites and genetic pollution (hybridization with red deer or red deer hybrids).
- The costs of regulating the game farming industry and the impacts of such costs on the state's elk management program.
- Potential that an established market for animal parts and live elk (prompted by expansion of the game farming industry) could result in accelerated elk poaching.

Prompted by importation of several elk/red deer hybrids to the state by two Montana game farmers during the summer of 1991, the Fish, Wildlife and Parks Commission enacted an emergency importation moratorium on several exotic species and red deer hybrids. Concurrently, DFWP and the Department of Livestock initiated a process to formulate new game farm rules addressing operation and regulation of game farms in Montana. This action was undertaken under the auspices of legislation passed during the 1991 legislative session (HB 565). This effort, involving participation by the game farming industry and input from the general public, culminated on May 15, 1992 with joint adoption of new game farm rules by DFWP and Department of Livestock. Revision of the state's game farm statutes will be pursued during the 1993 legislative session.

THE ELK PLAN AND MANAGEMENT OF OTHER WILDLIFE SPECIES

Habitat requirements of elk overlap those of a multitude of other wildlife species, most notably mule deer and white-tailed deer. Management objectives outlined in the elk plan represent a balance with existing management objectives for other wildlife populations. Potential competition between elk and other ungulate species on winter ranges is the most prevalent consideration. For example, elk management objectives for the Sun River portion of the Bob Marshall EMU represent a balance between the requirements of resident and migratory elk populations and a sizable bighorn sheep herd, which also utilizes the area during the winter.

To the extent possible, the needs of a variety of nongame and threatened or endangered species have also been considered in formulation of management objectives for elk. The gray wolf, currently classified as endangered under federal and state law, is an exception. Wolf recovery

in Montana is occurring as a result of natural recolonization by wolves from Canada. Eventual distribution of wolves in Montana and future impacts of wolf recovery on the state's elk management program are as yet undetermined. If wolf predation on elk becomes substantial, it could potentially replace a portion of the annual hunter harvest or prompt adjustments in elk population objectives to accommodate ungulate predation by wolves. Without authority to manage wolves, the State of Montana does not have the option of managing wolf numbers to correspond with elk population objectives.

STATEWIDE MANAGEMENT GOAL

Maintain elk populations in a healthy and productive condition and cooperate with public and private land managers in the management of elk habitat to provide hunting opportunity, a diversity of hunting and viewing experiences and general enjoyment by the public.

STATEWIDE HABITAT OBJECTIVES

- 1) Identify elk habitats critical to attaining and maintaining objectives for elk populations and elk-related recreation.
- 2) Recognize the contributions of private and public land managers in the management and maintenance of elk habitat and work toward development of cooperative programs to maintain the current amount of productive elk habitat (approximately 26,875,000 acres) in Montana.
- 3) Work with land managers to maintain elk habitat offering adequate security so that elk harvest is distributed throughout the hunting season, with no more than 40% of the annual bull harvest taken during the first week of the general season (over a 3-year period).

HABITAT MANAGEMENT STRATEGIES

For each EMU, DFWP will identify priority habitat management actions required to maintain, enhance or prevent deterioration of elk habitat values on public and private lands. DFWP will work cooperatively with state and federal land management agencies and private land managers to pursue the following habitat strategies:

- Monitor key elk summer ranges to maintain forage productivity and availability. If deterioration of elk summer range has occurred, identify the cause and design measures to improve forage conditions.
- Identify, map and maintain or enhance key elk winter ranges.
- Identify, map and maintain important thermal cover in elk wintering areas.
- Identify, map and maintain key fall security areas and secure migration corridors linking elk security areas and fall/winter ranges.
- Assess and monitor elk vulnerability in each EMU in relation to vegetation cover and density, topographic relief, elk movement patterns, hunter use patterns and presence and status of roads. In circumstances where fall elk security has been reduced, pursue the following strategies:
 - Fully assess the ramifications of additional timber harvest on elk vulnerability, prior to consideration of second entry timber harvest.
 - Encourage location of timber cutting units in a manner that prevents excessive fragmentation of elk habitat, including isolation of elk security areas.
 - Encourage maintenance of timber cover and discourage location of roads in travel corridors linking elk security areas and feeding areas.

- Identify areas where elk security could be protected or enhanced through road closures or other restrictions on motorized access.
- Promote obstruction of sections of existing roads in elk security areas to minimize mechanized and/or foot travel (does not necessitate destruction of the road base). The most ideal circumstances for effective implementation of a road closure is the case of a low standard or temporary road passing through a half-mile or longer stretch of dense timber with heavy downfall.

The DFWP will also:

- Identify key inholdings for which land exchanges could secure important elk habitats or provide needed access to public lands.
- Review proposed land exchanges involving federal or state lands and assess potential ramifications to the elk resource.
- Discourage habitat manipulations detrimental to elk populations, such as prescribed burning or spraying of sagebrush located on important sagebrush elk winter ranges and elk calving areas.
- Identify parcels of critical elk habitat with the potential to provide increased benefits to elk through acquisition of easements, lease agreements or fee title by DFWP or other state or federal agency. Such arrangements would be negotiated with willing landowners.

Public Lands: DFWP personnel will work closely with public land managers to plan and evaluate resource developments that could potentially affect habitat productivity and elk security - to include timber harvest, grazing systems, cultivation, habitat enhancement projects, mining, oil and gas exploration, road construction and recreation developments. This includes participating in review and revision of Forest Plans, Allotment Management Plans (AMPs) and Resource Management Plans (RMPs) prepared by land management agencies. DFWP personnel will promote land management practices that minimize detrimental impacts to productivity of elk habitats, elk security levels and elk hunting recreation with emphasis on:

- Maintaining key security areas used by elk during the hunting season, including secure migration corridors linking summer ranges and traditional winter ranges.
- Encouraging location of new roads in areas where they will not traverse important elk travel corridors or bisect the zone between important fall security areas and elk winter ranges.
- Designing and implementing cooperative habitat enhancement projects.
- Designing and implementing cooperative access and travel management plans.

Private Lands: DFWP personnel will work with private and corporate land managers with emphasis on the following areas:

- Technical assistance, upon request, to landowners in management of elk habitats, including design of land management programs that benefit both elk and livestock operations.
- Identification of critical elk habitats located on privately-owned lands (including corporate lands) emphasizing parcels with potential for enhancement through changes in land

- management practices, leases, conservation easements, land exchanges, fee title acquisition or other means agreeable to private landowners.
- Consultation with county planners regarding the location and design of subdivisions and other developments proposed for location on traditional elk ranges.

DFWP Lands: DFWP will manage Wildlife Management Areas (WMAs) to:

- Maximize wildlife values and wildlife-related public recreational opportunities.
- Demonstrate land management practices beneficial to or compatible with management of wildlife (to include rest-rotation livestock grazing systems, cultivation practices and various habitat manipulations such as prescribed burning).

Habitat Monitoring: In order to maintain familiarity with local trends in habitat condition, wildlife biologists will conduct field inspections, including monitoring of permanent range transects. DFWP field personnel will also maintain dialogue with personnel of state and federal land management agencies and private landowners in order to monitor land ownership, land management status and landowner tolerance for elk numbers in key elk habitats.

Permanent transects and plots on DFWP-administered WMAs will be monitored to assess composition and condition of plant communities in relation to vegetation objectives stated in WMA management plans. Federal and state land management agencies will be encouraged to similarly monitor elk winter ranges located on lands they administer. When available to DFWP, a Geographical Information System (GIS) will be utilized to monitor land use changes in seasonal elk habitats.

Elk security will be monitored indirectly by documenting distribution of elk harvest during hunting season. Low elk security may be indicated if more than 40% of the annual bull harvest occurs during the first week of the general season over a three-year period. This criterion does not apply to years with unusually early or heavy snows that result in an unusually early or large harvest. Likewise, maintenance of adequate elk security cannot be assumed during years characterized by open, dry, warm hunting seasons during which an unusually low percentage of bull harvest occurs the first week. Other criteria indicative of elk security trends include total bull harvest, postseason age structure of the bull population, location of elk kills and miles of new road constructed.

Recognizing that elk select areas with the best forage conditions, identification of elk travel corridors will take into account annual variation in forage conditions. Such variability may be influenced by weather, fires, livestock distribution and utilization and, in the case of managed grazing systems, the rotation sequence of rested versus treated pastures.

STATEWIDE POPULATION OBJECTIVES

- Maintain the current late-winter population of approximately 89,000 elk. Although substantially greater numbers of elk could be supported by the existing habitat base, DFWP considers this figure (which takes into consideration adjustments in elk population

objectives for individual EMUs) to be compatible with existing land uses and landowner tolerance for elk use of private lands.

- 2) Maintain an observed late-winter bull:cow ratio in each EMU commensurate with local elk security levels and population characteristics. An observed bull:cow ratio of 5:100 is considered a minimum criterion warranting corrective action.
- 3) Maintain late-winter calf:cow ratios commensurate with habitat productivity and elk security levels characteristic of each EMU. Calf:cow ratios of 35:100 and 20:100 are considered minimum criteria warranting corrective action for EMUs east and west of the Continental Divide, respectively.

POPULATION MANAGEMENT STRATEGIES

In response to strong public sentiment to maintain the existing hunting season format, elk populations will continue to be managed within the framework of an annual five-week general hunting season and a five- or six-week archery season (dependent on the timing of the general season). Recommended hunting season regulations for each EMU will be based on the inherent capacity of the habitat to produce and sustain elk, as reflected by the following parameters:

- Population size and age/sex composition.
- Objectives for late-winter population levels and herd composition.
- Habitat carrying capacity, which takes into consideration other land uses occurring in elk habitats.
- Fall elk security levels.
- Status of elk population levels in relation to landowner tolerance for elk on private lands.
- Potential for game damage.
- Recreation potential, as influenced by land ownership and public access.

Early or late scheduled (annual) hunting seasons may be implemented according to the following criteria:

- 1) Early backcountry elk hunts may be scheduled for the primary purpose of providing public recreation in remote areas with excellent elk security, where such hunts are not in direct conflict with livestock interests or other established uses.
- 2) Late-season hunts may be scheduled only for the purpose of attaining population management objectives.
- 3) Late seasons to target specific animals causing game damage may be scheduled only if every possible approach to harvesting those animals during the general season has been exhausted, and then only if the affected landowner has not intentionally made such animals unavailable to hunters during the general hunting season by means of closure to public hunting or leasing of hunting rights.
- 4) Late seasons may be scheduled to manage migratory elk herds if they are accessible to hunters only after the general season.

- 5) The designation of late-season hunting permits (either-sex or antlerless) will be consistent with the hunting season regulation and/or permit designation in place during the general season.

Late-season archery hunts will not be scheduled unless the following criteria (in addition to those above) are met:

- 1) The need for safety precautions (proximity to human population centers, dwellings, livestock and other property).
- 2) The need to achieve short-term elk redistribution.
- 3) Population management objectives are consistent with those used to justify any concurrent late rifle season.

Telemetry will be employed to document herd movements and delineate yearlong distribution in areas where such information is deemed necessary to attain population objectives.

The DFWP elk management program does not include provisions for augmentation of existing elk populations through transplanting. In the context of current elk distribution and population levels, elk transplants are unwarranted.

Any future increase in Montana's statewide elk population will be contingent upon development and implementation of new programs that will enhance landowner tolerance for elk numbers.

Population Monitoring:

Wildlife populations are dynamic, with fluctuating birth and death rates corresponding to variations in weather conditions and other natural events, plus human influences that affect habitat conditions and annual hunter harvest. Population status and trends will be monitored on an annual basis via aerial and/or ground surveys of major elk herds. Summer production surveys to assess trends in calf production will be conducted for some elk herds. Late-winter/early spring surveys will be conducted on major elk winter ranges to assess population trends and sex and age composition of wintering elk herds. Post-winter herd condition and calf survival will be assessed during early spring surveys.

In EMUs that do not lend themselves to aerial surveys because of dense timber canopy or scattered elk distribution, population trends will be monitored through regular surveys of small "trend areas" representative of major habitats in the unit. Assessment of population trends will be augmented by sex and age data obtained at hunter check stations and results of DFWP's annual, statewide hunter harvest survey.

Observed bull:cow ratios are not necessarily inclusive of all the bulls in an elk population. Recognizing that bulls - particularly older bulls - often segregate themselves from cow/calf herds during winter months, observed late-winter bull:cow ratios are intended to represent trends in population composition rather than actual population composition.

Potential consequences of road closures will be assessed prior to being proposed. The impacts of such road closures on bull harvest and postseason bull age structure will be monitored. Although road closures have been demonstrated to encourage elk to remain in the area accessed by the road, they have not been demonstrated to improve survival of bull elk or to maintain a diverse bull age structure.

Trends in population condition will be monitored through body condition and growth rates of harvested elk examined at hunter check stations (expressed by antler, skeletal and body measurements), supplemented by observed calf:cow ratios and over-winter mortality rates.

STATEWIDE RECREATION OBJECTIVES

- 1) Provide a five-week general elk hunting season and a five- or six-week archery season (dependent upon the timing of the general season)
- 2) Manage for an annual harvest of 23,450 elk.
- 3) Provide 673,800 days of hunting recreation annually for up to 123,100 hunters.
- 4) Maintain an annual bull harvest comprised of at least 25% branch-antlered bulls in every EMU and at least 60% branch-antlered bulls in 20% of the EMUs.
- 5) Collaborate with land management agencies, civic organizations and private groups to identify and develop "Watchable Wildlife" opportunities that will provide recreation and education benefits to the public.

RECREATION MANAGEMENT STRATEGIES:

The recreational opportunity provided by a five- or six-week archery season and a five-week general hunting season is unique to Montana. Resident hunters are very protective of this tradition. The productivity of elk habitats, location and extent of elk security areas and amount and kinds of public access determine the public recreation potential of each EMU, including the amount of public hunting opportunity and the variety of elk hunting experiences. Maintenance of key elk security areas and secure migration corridors is crucial to Montana's ability to continue to provide substantial public hunting opportunity and maintain a diverse bull age structure. In addition to habitat strategies outlined on pages 14 through 16, the following hunting season strategies will be employed to meet recreation objectives:

General Season: The five-week period from mid- to late-October to mid- to late-November. The objectives of the general season are to provide public hunting recreation encompassing an array of hunting experiences and to manage wildlife populations. The general season may be either-sex, or restricted by sex (any-bull) and/or age (BTB bulls only), or any combination thereof. (See definitions under "Hunting Season Regulations" in the Reference Section.) Special permits may also be offered during the general season, specific to the sex and age of elk that can be legally harvested.

Archery-Only Season: The five- or six-week period (dependent on timing of the general season) extending from early-September into October during which time only a longbow, recurve bow or compound bow may be used. The objective of the archery-only season is to provide public hunting recreation.

Scheduled Early Seasons: The purpose of early backcountry elk hunts scheduled prior to the five-week general hunting season is to provide public recreation. The purpose of all other scheduled early or late hunting seasons is to attain stated population objectives.

Within each of the hunting season frameworks above, specific hunting regulations recommended to the Fish, Wildlife and Parks Commission will be based on the habitat capabilities, biological potential and social attributes (land ownership, access, landowner tolerance for wintering elk, etc.) of each EMU.

It is the intention of DFWP to provide the optimum amount of hunting opportunity possible (within biological and social constraints) by maintaining the current statewide five- to six-week archery season and five-week general hunting season. During the general season, hunters may exercise their choice to hunt with a percussion rifle, muzzleloader, shotgun, long bow, crossbow or any combination thereof. Where public safety is a consideration, rifles may be prohibited. However, the hunter's option to exercise choice of a weapon will be maximized in this situation through the use of a combined archery/muzzleloader/shotgun season wherever possible. Any future special weapon seasons will be implemented within the framework of the existing special archery season.

Elk viewing opportunities are most prevalent during the winter months. Viewing sites and/or interpretive displays will be developed in locations where concentrations of wintering elk can be viewed without impacting winter range values. Yearlong elk viewing opportunity, which varies among EMUs according to vegetation and terrain conditions, will be accommodated in formulation of postseason population objectives (population level and sex and age composition). Public interest in elk viewing is greatest in EMUs receiving substantial use by recreationists engaged in hiking, backpacking, fishing, photography and other forms of outdoor recreation.

Recreation Monitoring:

Elk harvest will be monitored through use of DFWP's annual hunter harvest telephone survey and hunter check stations. Information from these sources allows biologists to monitor total numbers of elk harvested, the sex and age composition of the harvest, antler point classification for bulls harvested and distribution of the harvest by time period. Data collected through the telephone survey and hunter check stations will be augmented by outfitter reports, tooth turn-in programs and contact with hunters in the field.

Hunter numbers and distribution will be monitored through the annual hunter harvest survey, hunter check stations, and camp and trailhead checks.

Surveys of user publics will be conducted as needed to identify issues and solicit input on proposed programs. Recreation satisfaction will be monitored through contacts made at hunter check stations, regional offices, public meetings and in the field.

Providing non-hunting elk recreational opportunity to the public is an integral part of the DFWP elk management program. Currently, however, there are no mechanisms in place to measure or monitor trends in viewing, photography and other nonconsumptive uses of wildlife.

GAME DAMAGE OBJECTIVE

Manage elk populations at levels commensurate with other land uses and, to the extent possible, prevent game damage from occurring. Where damage to standing or stored agricultural crops has occurred, DFWP will implement timely and effective actions to provide relief to landowners, according to provisions of DFWP's game damage policy.

GAME DAMAGE MANAGEMENT STRATEGIES

Preventive:

- Improve communications between DFWP personnel and landowners.
- Establish population objectives that are reasonable and commensurate with game damage potential and landowner tolerance for elk numbers on private lands.
- Recommend hunting season regulations designed to accomplish adequate harvest to attain population objectives.
- Work with private landowners to attain levels of public hunting access that will achieve adequate harvest.
- Work to maintain or enhance landowner tolerance for wintering elk. Conservation easements, leases and exchange grazing on state-owned WMAs may be implemented as appropriate.
- Manage WMAs to encourage elk to winter on these state-owned lands rather than on private lands and work with state and federal land management agencies to design and implement habitat management strategies designed to attract wintering elk from private lands to other publicly-owned elk winter ranges.

Remedial:

By law, DFWP is required to respond to all big game damage complaints. Two Montana Supreme Court decisions have ruled that private landowners are expected to accommodate a certain amount of wildlife use on their lands. If, however, combinations of circumstances result in wildlife use of private land at "unreasonable levels" that cause problems for landowners, the state, with some exceptions, assumes responsibility to help eliminate, prevent or resolve these problems.

Montana law was amended during the 1989 legislative session to provide for game damage assistance only to landowners who meet the following requirements: 1) Allow public hunting during established hunting seasons, or 2) Do not significantly reduce public hunting through imposed restrictions. The law also provides an exception to this requirement when unique or special circumstances exist that may render public hunting inappropriate. For example: a situation in proximity to a town or subdivision where public hunting would pose a definite threat to the safety of persons and property.

The general hunting season is DFWP's primary tool for regulating wildlife populations. Effective management of wildlife populations on private lands is contingent upon hunter access to and/or through private lands. Special preventive measures, such as repellents, scare devices and materials for excluding elk from stored food sources, may be used in problem areas where hunting has not effectively addressed the potential for game damage problems. Damage hunts can also be implemented to address problems occurring at specific locations. Montana's game damage policy outlines the strategies used by DFWP to address game damage situations.

Game Damage Monitoring:

- DFWP will monitor elk numbers and distribution on private lands and monitor landowner tolerance for elk through regular contact with landowners who have elk on their properties.
- DFWP will assess the effectiveness of remedial game damage actions by monitoring the response of elk to those measures.
- If game damage problems become chronic, EMU population objectives and local hunting season regulations will be reevaluated and adjusted if necessary.

ACCESS OBJECTIVES

Maintain public hunting access at levels that will render hunting an effective population management tool. Concurrently, DFWP will work to prevent public access from reaching levels that compromise existing diversity of recreational experiences in each EMU. DFWP will also strive to prevent public access levels from exceeding security thresholds required to hold elk on traditional fall ranges during hunting season.

ACCESS MANAGEMENT STRATEGIES

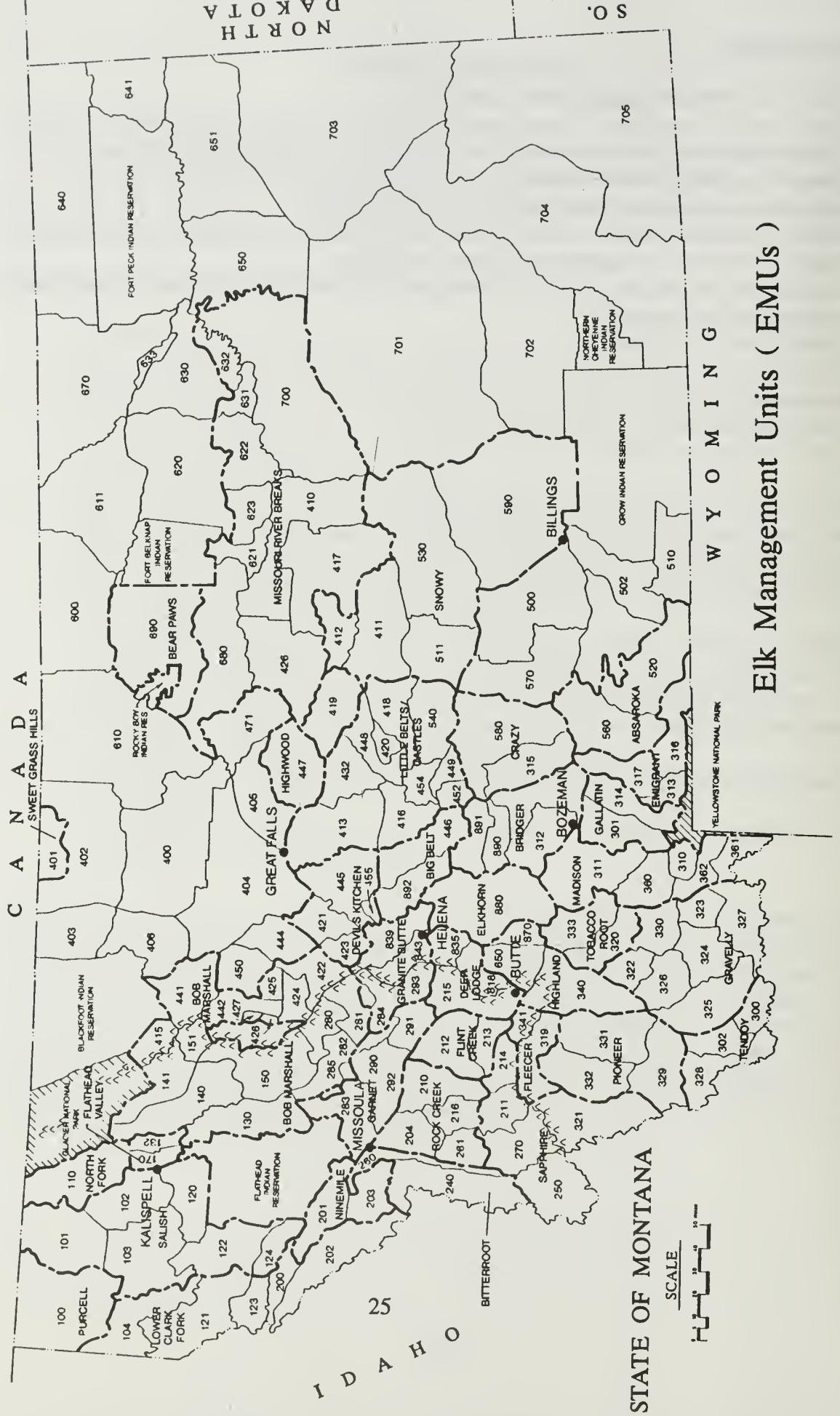
- DFWP personnel will encourage private landowners to maintain public hunting access by providing assistance with hunter management. Forms of assistance include landowner permission booklets, signs, patrolling services and assistance with establishment of walk-in areas and parking areas at identified access points. Where appropriate, block management agreements may be negotiated with private landowners. (Refer to "Definitions" in the Reference Section.)
- Under provisions of the landowner/sportsperson relations program, which recognizes landowners for their role in maintaining elk habitat and providing access to recreationists, DFWP will coordinate programs that foster improved relations between landowners and sportspersons, support laws that protect the legal rights of landowners and assist local landowner/sportsperson problem-solving groups.
- Upon learning of reductions in public hunting access, DFWP will contact appropriate landowners to determine the cause of the restrictions and whether DFWP can provide assistance that would encourage the landowner to reopen the land to hunting.
- DFWP will participate with personnel of land management agencies in development and implementation of access and travel management plans.
- DFWP will pursue cooperative access programs with large private corporations in the western part of the state.
- Handicapped access provisions of the DFWP's "Crossing the Barriers" disabled accessibility plan will be implemented.

Public access may be considered excessive if: 1) elk security is reduced to the point that elk abandon traditional range during hunting season, congregating instead on lands where hunting is prohibited or restricted, or 2) elk security has deteriorated to the point that the area can no longer provide a diversity of recreational experiences. To prevent these possibilities, DFWP will promote maintenance of key unroaded areas that provide important elk security and offer backcountry or roadless recreation. Where elk security has already been reduced, DFWP will encourage land managers to allow regeneration of hiding cover prior to additional timber harvest and coordinate with land managers to regulate distribution of hunting pressure through use of road closures or other motorized vehicle restrictions.

Access Monitoring:

DFWP will work with land management agencies to:

- Inventory existing road systems, trails and trailheads on state and federal lands.
- Determine existing road densities.
- Monitor development of additional roads and trailheads.
- Identify important access points (current and future) and participate in planning the establishment and management of those access points.
- Review and monitor the status of hunting access on private lands through contacts with landowners and hunters.



Elk Management Units (EMUs)

THE BOB MARSHALL WILDERNESS COMPLEX EMU

(Hunting Districts 130, 140, 141, 150, 151, 280, 281, 282, 285, 415, 422, 424, 425, 427, 428, 441 and 442)

Description: The 6,250-square-mile Bob Marshall Wilderness Complex (BMWC) EMU straddles the Continental Divide and encompasses the Bob Marshall, Great Bear and Scapegoat Wilderness areas. This EMU consists of 17 hunting districts (HDs) within DFWP administrative regions 1, 2 and 4, including the Sun River Game Preserve and portions of the Lewis and Clark, Flathead, Helena and Lolo national forests. It is bounded on the north by Glacier National Park, the Blackfeet Indian Reservation to the northeast and the Confederated Salish and Kootenai Tribes to the west. Although private land makes up only 21% of the unit's land base, 42% of the elk winter range is on private lands.

Public Access: Public access to or through some private lands along the eastern slope of the Rockies and the Blackfoot drainage is limited or non-existent. The most serious access problems currently exist in the Sunrise-Sunset area north of Rogers Pass. Conversely, excessive open-road densities exist on corporate and public lands in localized areas along the Blackfoot, Seeley-Swan and South Fork of the Flathead. Public access to the wilderness portion of the unit is provided by more than 60 maintained trailheads.

Elk Populations: More than 80% of the 9,000 to 11,000 elk in this unit live year-round within Wilderness boundaries or use Wilderness habitats during portions of the year. Eighty percent of the elk that summer in the Wilderness migrate to non-Wilderness winter ranges. Forty major winter ranges, comprising 65% of the available winter range in the unit, are located outside Wilderness boundaries. Privately-owned winter and spring elk range is located along the East Front and throughout the Blackfoot, Clearwater and Swan drainages.

The potential for elk production varies among different portions of the unit. Elk that occupy the south and east peripheries consistently exhibit higher calf survival than do the elk herds that occupy the Middle Fork of the Flathead in the interior of the BMWC. Bulls that reside yearlong within the Wilderness boundaries exhibit higher survival through the hunting season than those in non-Wilderness areas.

The entire BMWC EMU lies within the designated recovery zone of the northern Rocky Mountain gray wolf. If recovery goals are reached, DFWP anticipates that a minimum of 50 wolves will occupy this unit. Wolf distribution is expected to coincide with the distribution of the big game winter ranges. Numbers of elk currently harvested is estimated to be equivalent to the average annual surplus produced. DFWP therefore assumes that elk killed by wolves will compound current mortality.

Recreation Provided: The unit provides 42,000 days of hunting recreation to about 12,000 hunters annually. It also provides a diversity of elk viewing opportunities, ranging from viewing elk in high alpine wilderness settings during summer to viewing large concentrations of

wintering elk on the Sun River and Blackfoot-Clearwater WMAs. Stops along U.S. Highway 2 adjacent to Glacier National Park and state highway 83 at Clearwater Junction provide excellent elk viewing opportunities during winter and spring. The Sun River Preserve provides opportunities to view elk during the rut.

Current Annual Elk Harvest: 1,900 (1,100 antlered and 800 antlerless). The composition of recent bull harvests has varied by hunting district, ranging from 50-60% yearlings in HD 285 to 20-30% yearlings in HD 150.

SUMMARY OF PUBLIC COMMENT

Public input was provided by individuals and organizations, spanning a wide spectrum of viewpoints:

- The most frequently expressed topic of concern pertained to elk habitat relationships and habitat management. The public expressed a desire for additional habitat management actions (such as prescribed fire in the wilderness and on winter ranges) and expanded wintering areas along the East Front and in the Blackfoot-Clearwater drainages. Maintenance of westside winter ranges was also a concern.
- The public believed that more attention should be directed to private landowners within the unit that winter elk, with the objectives of minimizing game damage, promoting elk population increases and expanding hunting opportunity on private lands.
- The issue of competition between archers and gun hunters for bull elk surfaced, primarily in regard to hunting districts peripheral to the Wilderness.
- The public voiced concern about potential competition between early backcountry rifle hunters and general season hunters along the periphery of the Wilderness and competition between outfitted and non-outfitted hunters for elk harvest opportunity. Overuse of the Wilderness by commercial interests was also an issue of concern.
- Although hunters expressed a desire to hunt elk for meat, they also wanted to harvest older bulls. A frequent comment was that too much hunting pressure is applied on bigger bulls. Hunters also wanted to maintain a five-week general big game hunting season, even if that results in survival of fewer bulls.
- The public expressed a preference for land management actions (such as road management and enhancement of elk habitat) rather than more restrictive regulations to reduce elk vulnerability during hunting season.
- Concern was expressed about impacts of snowmobile use in proximity to elk winter ranges and the need for elk security needs to be fully considered in the planning of commercial snowmobile recreation developments.
- Public comment supported use of A-7 licenses to regulate the antlerless harvest and brow-tined bull (BTB) hunting regulations (with the perception that the BTB regulation would result in increased numbers of older bulls postseason).
- Public comment indicated opposition to permit-only hunting, except as applied in special circumstances involving migratory elk herds and publicly owned elk winter ranges (such as in HDs 282 and 425).

- The issues of wolf recovery and potential abolishment of the preserve status of the Sun River Game Preserve are controversial, subject to the full spectrum of public opinion.

MANAGEMENT GOAL

Manage elk populations at current levels to provide a variety of recreational experiences, including hunting and general enjoyment by the public. Emphasis will be placed on managing for mature bull elk in a backcountry setting.

HABITAT OBJECTIVES

- 1) Maintain the current distribution of elk over three million acres of habitat.
- 2) Reduce the length of time that elk herds are dependent on winter ranges by managing productivity and security of fall elk habitats to delay migration to winter ranges.
- 3) Increase private landowner tolerance for wintering elk while solidifying management of critical elk winter range to benefit elk.

HABITAT MANAGEMENT STRATEGIES

DFWP will work cooperatively with land management agencies to emphasize the following habitat management strategies:

- Use of natural and prescribed fire on Wilderness and non-Wilderness public lands.
- Road and trail management necessary to meet harvest objectives.
- More intensive habitat management on the state's WMAs.
- Establishment of additional walk-in hunting areas.
- Implementation of Bonneville Power Administration (BPA)-funded mitigation efforts in the South Fork of the Flathead.
- Design and implementation of cooperative livestock grazing programs which, in some cases, would enhance grazing opportunities for private landowners.
- Cooperative planning of oil, gas and mineral development.
- Cooperative planning and implementation of wilderness management programs.
- Protection of key winter ranges through conservation easements and/or acquisition of fee title. Priority winter ranges are located along the East Front of the Rockies, the Blackfoot-Clearwater, the Swan Valley, the Middle Fork of the Flathead River and adjacent to WMAs.
- Cooperative management programs with the Blackfeet Indian Tribe to increase elk populations in the Badger-Two Medicine area. Similar negotiations will be pursued with the Salish and Kootenai tribes to foster management of native American hunting off the reservations.
- Pursue abolishment of preserve status of the Sun River Game Preserve to provide for better utilization of winter ranges adjacent to the Preserve and encourage later migration to the Sun River WMA. DFWP expects this strategy would discourage early migration

to the WMA and reduce the total number of animals that are currently forced to winter there.

POPULATION OBJECTIVES

- 1) Maintain the current wintering elk population of 9,000-11,000.
- 2) Maintain an observed average late-winter bull:cow ratio of at least 20 per 100.
- 3) Maintain a minimum observed late-winter ratio of at least one BTB per spike.
- 4) Provide for annual harvest of at least 1,000 antlered and 1,000 antlerless elk.
- 5) Maintain a bull harvest comprised of at least 50% BTBs, including 15% bulls 4.5 years or older.

POPULATION MANAGEMENT STRATEGIES

Chronic game damage will be addressed with additional antlerless permits and A-7 licenses or local special seasons. Harvest of the antlerless segment of non-migratory elk populations implicated in game damage problems will be increased. Migratory herds in more remote habitats may be increased without negative impacts to landowners or to winter ranges.

DFWP will monitor impacts of wolf recovery on elk populations. If a recovered wolf population in the BMWC is to be publicly supported and sustained, elk habitats should be managed to increase elk populations in proportion to the number of elk killed by wolves. Because the annual surplus of elk is currently taken by hunters, public acceptance of wolf recovery will be greatest if it does not result in reduced elk hunting opportunity. In the absence of elk population increases, antlerless harvest will have to be curtailed in areas of substantial wolf predation.

An enhanced enforcement presence will be encouraged in all areas, especially in backcountry hunting districts. Increased effort will be directed toward encouraging a hunting ethic that discourages illegal take of bulls and transfer of elk tags between hunters.

Regulations: The elk population will be managed using a combination of either-sex hunting, antlerless permits and A-7 licenses, according to local circumstances. The general hunting season will be five weeks long, except for totally Wilderness hunting districts (Hds 150, 151 and 280), which may have an 11-week hunting season.

Summary of population management strategies for individual or grouped hunting districts:

Elk numbers will be increased in the Swan (HD 130) under the current any-bull season. Antlerless permits or A-7 licenses will be instituted and increased as the population increases.

Elk numbers will be increased slightly in HDs 140 and 141 under the current season type (one week either-sex, followed by four weeks of any-bull hunting). Enhanced elk security resulting from recent road closures should slow the current rate of female harvest.

The traditional early rifle season in HDs 150, 151 and 280 will be continued and closely monitored. An evaluation of the experimental BTB season in HD 280 will help determine applicability of that season type in a backcountry area.

In HDs 282 and 285, elk populations will be held stable using antlerless permits or A-7 licenses during the general season. New and existing road management programs will be in effect in HD 285. Hunting pressure during the first three weeks of the general season will be regulated in HD 282 to discourage bulls from seeking refuge in this permit-only district.

HDs 280, 281 and 422 together encompass the yearlong range of a substantial number of elk. Despite an increase in wintering elk in HD 422, none of the unit's objectives for bulls is currently being met in any of these districts. As stated above, the experimental BTB season in HDs 280 and 281 will be evaluated to determine if population objectives can be met with this season type. Bull numbers in HD 281 will be regulated with the five-week general hunting season and road management programs in the Kershaw Mountain and Ovando Mountain areas. In HD 422, where most of the wintering elk migrate west of the divide for the summer, management will be aimed at stabilizing the population at 500. Because most elk winter on private land, population levels in this hunting district are determined primarily by landowner tolerance. Access to public lands is limited due to land ownership patterns and rugged terrain. Liberal, either-sex hunting will continue to control this migratory elk herd until winter range is secured by easement, lease or acquisition, hunter access is improved, or the distribution of wintering elk changes. As a result of the 1988 Canyon Creek fire, winter ranges on USFS lands are expected to become more attractive to elk. If redistribution occurs, hunting regulations will be adjusted to accommodate a population increase on public lands.

The management goal in the Sun River drainage is to maintain a population of 2,500 wintering elk. Elk numbers will be regulated through harvest quotas. Hunting regulations will be designed to reduce the current rate of bull harvest with the objective of retaining older-aged bulls in the population. This may be accomplished by restricting the first portion of the season to antlerless-only, followed by either-sex hunting until quotas are reached.

The elk herd in HD 415 is currently small but continues to grow slowly. This hunting district is mostly inaccessible by vehicle, and escape cover is plentiful except along the perimeters of the Blackfoot Indian Reservation and Glacier National Park. Yearlong illegal hunting is suspected to be the primary factor suppressing population growth during the past several decades. The outlook for this herd has improved during the past five years as a result of enhanced enforcement efforts and improved vehicle management on the portion of the hunting district administered by the Lewis and Clark National Forest. The elk population in HD 415 will be regulated by a five-week hunting season with the first one or two weeks either-sex and the balance of the season any-bull. This season framework will allow elk numbers to increase. More liberal antlerless seasons will be initiated when a wintering population of 500 is reached.

Enhanced monitoring of elk populations in HD 415 will be implemented if oil and gas exploration activities are increased in the Badger-Two Medicine area. Assessment and monitoring of any displacement caused by exploration activities should be accomplished by use of radio-marked individuals.

The elk herd wintering in HD 441 is slowly increasing and will be allowed to approach 500 before a liberal harvest strategy is considered. This population will be regulated with a five-week any-bull hunting season. Elk hunting east of the Bob Marshall Wilderness boundary will be by permit only. Any-bull hunting will be conducted west of the Wilderness boundary. This strategy provides a safety zone for bulls once they reach winter range. The antlerless harvest will be controlled by special permits. Bull harvest in HD 151 greatly affects survival of bulls wintering in HD 441. Therefore, changes in HD 151 regulations may be required to achieve appreciable population increases in HD 441.

GAME DAMAGE STRATEGIES

- Increase contact with landowners to improve communications and monitor levels of game damage potential.
- Reduce elk numbers up to 20% in the Sunrise-Sunset vicinity. To offset population reductions in this area, corresponding population increases will be pursued in the Swan, South and Middle Forks of the Flathead, the Badger-Two Medicine and the Blackleaf-Dupuyer Creek areas.
- Pursue cooperative grazing programs where appropriate, and potential grazing exchanges adjacent to DFWP-owned wildlife management areas. Livestock grazing will be used to enhance vegetation condition with the objective of encouraging elk to use WMAs rather than private lands.
- Hunter harvest will be directed toward resident herds implicated in depredation, while permitting migratory herds to increase.

ACCESS OBJECTIVES

- 1) Improve public access to selected private lands where access is currently limited.
- 2) Stabilize levels of trail access to wilderness areas.
- 3) Solidify agreements with corporate timber land managers for public access and road management.

ACCESS STRATEGIES

- Pursue conservation easements with private and corporate land managers, including the Champion International and Plum Creek Timber Companies, to secure public access.
- Identify opportunities for block management agreements.
- Discourage additional trailhead access to the Wilderness.

- Discourage additional roading of backcountry areas such as the Badger-Two Medicine, Dearborn River, Monture and Dunham creeks and the Swan and Mission ranges. These backcountry areas are tracts of undeveloped land comprising tens of thousands of acres.

NORTH SWAN-FLATHEAD VALLEY EMU

(Hunting Districts 132 and 170)

Description: This 300-square mile EMU encompasses the heart of the Flathead Valley and the northern ends of the Swan and Mission mountains. Agriculture is the principal land use in this unit, with emphasis on lumber, grain and hay farming and specialty crops such as mint, seed potatoes and Christmas trees. Kalispell, Bigfork, Somers, Columbia Falls and associated rural subdivisions occupy a significant portion of the land area. Some unroaded areas remain in the northern Swan Range and along the east face of the Mission Mountains.

Public Access: Hunting access is limited on the valley floor, but is readily available on USFS lands, with the exception of the northernmost portion of the Swan Range.

Elk Populations: About 200-250 elk currently occupy Crane Mountain (the segment of the Swan Range between Columbia Mountain and Six Mile Creek) and the valley floor north of Lake Blaine. Opportunities for elk hunting are restricted by human population densities. Chronic game damage occurs north and west of Lake Blaine and south of Many Lakes in HD 132. The potential for elk-landowner conflicts is substantial.

Recreation Provided: This unit provides 1,000 days of hunting recreation for about 200 hunters annually. During the spring and early summer, elk grazing in hay meadows along Highway 35 north of Creston provide some wildlife viewing and photo opportunities.

Current Annual Elk Harvest: 20-30

SUMMARY OF PUBLIC COMMENT

Little public comment was received for this unit, reflecting the relatively limited potential of this area to produce elk or provide elk-related recreation. Both support and opposition to road closures was registered.

MANAGEMENT GOAL

Maintain the total elk population at its current level to minimize conflicts with private landowners and provide limited hunting opportunity.

HABITAT OBJECTIVES

- 1) Maintain current elk security levels.
- 2) Improve productivity of elk habitats on public lands.

HABITAT MANAGEMENT STRATEGIES

- Inventory road densities on Crane Mountain and the north Swan Range and recommend management strategies designed to maintain or improve elk security.
- Encourage habitat management practices such as timber harvest and prescribed fire on private lands to enhance habitat productivity.

POPULATION OBJECTIVES

- 1) On public lands, maintain an elk population of about 250, capable of sustaining an annual harvest of 35-45.
- 2) On private lands, maintain elk numbers at a level that satisfies public demand for viewing and general enjoyment, but below population densities that would result in game damage problems.

POPULATION MANAGEMENT STRATEGIES

Regulations: The recommended hunting season regulations for HD 132 is a five-week season comprised of an eight-day either-sex hunting period with any-bull hunting during the remaining 27 days. If necessary, additional antlerless harvest would be accomplished through use of antlerless permits. To prevent an increase in elk numbers on the floor of Flathead Valley, five weeks of either-sex hunting will be maintained in HD 170.

GAME DAMAGE STRATEGIES

- Maintain elk populations at levels that will result in minimal elk use of private lands.
- Improve communication with landowners who have elk on their lands and promote self-help programs such as stackyard fencing and strategic placement of winter livestock food stores.

ACCESS STRATEGIES

- Work with public land managers to develop cooperative road management programs on public lands to benefit elk and elk-hunting recreation.
- Work with private landowners to maintain current levels of public hunting opportunity.

NORTH FORK OF THE FLATHEAD EMU

(Hunting District 110)

Description: This mountainous 804-square-mile EMU lies immediately west of Glacier National Park and south of the Canadian border, encompassing the Whitefish Range. About 59% of the unit is USFS land and an additional 19% is administered by DSL. The remainder of the unit is in private ownership (a mixture of corporate and small privately owned tracts).

Public Access: The forested habitats within the North Fork drainage are extensively roaded as a result of timber harvest activities. All USFS lands are under an access and travel management program which incorporates seasonal or yearlong closure of particular roads or land areas. Road access on corporate and state timber lands is also plentiful, with regulations in place governing the use of motorized vehicles. About 85% of the unit is open to public hunting.

Elk Populations: The minimum summer-fall elk population estimate for this unit is 685. Elk numbers appear to be stable or slightly increasing. Elk are distributed over about 97% of the unit during the summer-fall seasons but congregate in winter on winter ranges comprising only 4% of the unit.

A large proportion of the unit is yearlong grizzly bear habitat and therefore will be managed for long-term benefits to the grizzly bear population. The unit also contains habitats that have been identified as suitable for recovery of the northern Rocky Mountain gray wolf. Wolves currently occupy areas adjacent to Glacier National Park and Canada and visit most of the remainder of the unit.

Recreation Provided: This unit provides 11,000 days of hunting recreation for about 1,800 hunters annually. Wildlife viewing opportunities are limited. Hunting experiences available include backcountry (5%), minimum motorized access (20%), moderate to highly motorized access (55%) and heavily roaded (20%).

Current Annual Elk Harvest: 110. Yearlings comprise 35% of the bull harvest and 28% are 6-point or larger bulls.

SUMMARY OF PUBLIC COMMENT

Public comment supported perpetuation of the current recreational character of the EMU. Elk security was a topic of concern with many people expressing an interest in reducing hunting pressure through additional road closures. Some believe that there are currently enough road closures. Support was voiced for managing the elk herd to achieve age and sex composition characteristic of elk populations that live in habitats offering good elk security.

MANAGEMENT GOAL

Increase elk numbers by 20%, maintain a bull age structure characteristic of elk populations in habitats with good elk security and provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 497,280 acres of occupied elk habitat.
- 2) Maintain and enhance elk security so that the harvest is distributed throughout the hunting season, with no more than 40% of the bull harvest occurring during the first week of the general season.
- 3) Work with the USFS to develop a cooperative program to address elk mortality attributed to wolves and the associated loss of recreational hunting opportunity. The program would include enhancing seasonal elk habitat to support additional elk.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with land management agencies, corporate timber land managers and private landowners to pursue the following habitat strategies:

- Incorporate elk security needs, including hiding cover and secure travel corridors, in the planning of timber sales and transportation systems.
- Establish and maintain habitat productivity levels compatible with the requirements of elk populations.
- Implement a cooperative road management program designed to achieve a maximum open-road density of one mile per section during hunting season and a maximum open-road density of 1.3 miles per section during the remainder of the year.
- Establish walk-in recreation areas where needed.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 670 elk.
- 2) Initiate management actions if the observed late-winter bull:cow ratio declines to 15 per 100 and persists for three consecutive years.
- 3) Maintain a minimum late-winter calf:cow ratio of 30 per 100.
- 4) Provide an annual harvest of 85 antlered and 85 antlerless elk, once the population objective is achieved.

- 5) Maintain a bull harvest comprised of at least 40% BTBs, to include 28% 6-point bulls.
- 6) Provide 14,784 days of hunting recreation for 1,800 hunters each year.

POPULATION MANAGEMENT STRATEGIES

Elk populations will be managed for current productivity and a 20% increase in numbers, with population increases occurring in areas of suitable habitat.

Regulations: The current hunting regulations (either-sex hunting during the first week followed by four weeks of any-bull hunting) will be maintained if elk security can be improved. If population objectives cannot be accomplished through efforts to enhance elk security, it may be necessary to implement restrictions on antlerless harvest and/or antler point restrictions.

GAME DAMAGE STRATEGIES Game damage is currently not a problem.

ACCESS STRATEGIES

- Develop cooperative access and travel management programs with corporate land managers and provide assistance in the form of manpower and materials.

PURCELL EMU

(Hunting District 100)

Description: Located in the extreme northwest corner of the state, this 1,400-square-mile EMU is bounded on the north by Canada, on the west by Idaho and on the south and east by the Kootenai River and Lake Koocanusa, respectively. The terrain is mountainous and heavily timbered, featuring some of the wettest forest habitat types in Montana. Lands administered by the Kootenai National Forest comprise 95% of the unit. The remaining 5% of the land base consists of small private homesteads located primarily along the major stream corridors (2%) and corporate timberlands (Champion International and Plum Creek Timber Company - 3%). The 170-acre Kootenai Falls Wildlife Management Area is situated along the north shore of the Kootenai River in the extreme southern portion of the EMU. Several small roadless areas, including Northwest Peaks, Buckhorn Ridge, Grizzly Peak, Roderick Mountain and Gold Hill, exist as scattered islands of unroaded habitat, comprising approximately 82,000 acres. Timber harvest is the dominant land use in the area.

Public Access: Approximately 3,000 miles of logging roads (about 2.1 miles of road per section) currently exist on USFS lands. Nearly every drainage is roaded or scheduled to be roaded in accordance with the Kootenai Forest Integrated Plan. Full implementation of the plan will result in a road network of approximately 4,000 miles. Although subject to some yearlong and seasonal travel restrictions for motorized vehicles, most of the road system (60%) is scheduled to remain open to motorized travel. All USFS system roads closed to motorized traffic are open to public use via foot, horseback, bicycle or other non-motorized means. With the exception of small private holdings (2%), the remainder of the area (98%) remains open to public use for recreational pursuits, including big game hunting. Remnants of a once extensive pack trail system remain in isolated locations throughout the unit, and provide foot access to the few remaining unroaded areas.

Elk Populations: During spring, summer and fall, approximately 1,100 elk inhabit about 85% of the unit. Good winter habitat is noticeably lacking, comprising no more than 10% of the unit. Elk numbers and distribution have expanded during the past decade due to some improvements in habitat, a series of mild winters, reductions in antlerless elk harvest and population augmentation through introduction of about 80 elk (since 1980) from the National Bison Range at Moise.

Recreation Provided: Hunting recreation is primarily roaded (90%) with 10% of the unit currently providing some unroaded hunting recreation. Backcountry hunting opportunity is lacking because the few remaining roadless areas are relatively small (5,000 to 20,000 acres) and accessible from perimeter roads for day hunting. Most elk hunting is accomplished by driving approximately 2,000 miles of open roads, walking approximately 1,000 miles of roads with motorized vehicle restrictions or hiking from roads for partial to full day hunts. This unit provides 16,000 days of hunting recreation to about 2,100 hunters annually. Due to heavily forested terrain and scattered distribution of elk, viewing opportunities are limited to incidental encounters by recreationists pursuing other activities. Some opportunity for observing elk in

their natural habitat is available in late winter-early spring when they congregate in open areas such as the Horse Range along state Highway 37 between Libby and Libby Dam.

Current Annual Elk Harvest: 175. The proportion of yearling bulls (spikes) in the harvest has increased, making up 46% of the annual antlered bull harvest. 16% of the bull harvest consists of 6-point or larger bulls.

SUMMARY OF PUBLIC COMMENT

Public comment indicated general satisfaction with the current recreational character of the EMU and a preference for implementing more road restrictions rather than shortening the hunting season to reduce elk vulnerability. Both support and opposition were registered for road closures and maintenance of roadless areas. Opposition to Wilderness designation and opposition to protection of roadless areas was based on the belief that multiple use is excluded from such areas. Other comments indicated interest in instituting sex and antler point restrictions in the hunting regulations. Public comment suggested a preference among hunters for the opportunity to harvest an elk for meat. However, hunters also expressed a desire for the opportunity to harvest older bulls.

MANAGEMENT GOAL

Manage for an expanding elk population commensurate with winter range capacity, with emphasis on maintaining an older age structure and providing a variety of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Maintain elk distribution on 810,000 acres and available elk winter range on 90,000 acres (90% and 10% of the EMU, respectively).
- 2) Maintain or improve elk security so that elk harvest is distributed throughout the season with no more than 75 antlerless elk harvested during the short antlerless portion of the season and no more than 40% of the bull harvest taken during the first week of the any-bull portion of the season.

HABITAT MANAGEMENT STRATEGIES

DFWP will work cooperatively with state, federal and corporate landowners to:

- Achieve increased consideration for elk habitat productivity and elk security needs in the planning of timber sales, transportation systems and habitat enhancement projects.
- Identify and map elk winter ranges.
- Manage limited winter range to accommodate a 25% increase in elk numbers.

- Achieve open-road densities not to exceed 3/4 mile of road per section in big game summer/fall range and no open roads on key winter ranges.
- Maintain about 90,000 acres of roadless elk security areas in the Northwest Peaks, Buckhorn Ridge, Grizzly Peak, Roderick Mountain and Gold Hill areas, which also provide roadless elk hunting recreation.
- Maintain or enhance approximately 5,000 acres of elk winter range annually, to include the following key areas: West Kootenai, Bristow Creek, Barron Creek, Alexander Creek, Horse Range, Rainy Creek, Sheldon Mountain, Quartz Creek, Bobtail Creek, Pipe Creek, Teepee Mountain, Seventeenmile Creek, Whitetail Face, Hensley Hill, Lick Mountain, Grubstake Mountain and Zimmerman Hill.

POPULATION OBJECTIVES

- 1) Manage for a 25% increase in elk numbers, from 1,100 to 1,400.
- 2) Achieve an observed late-winter bull:cow ratio of 15 per 100.
- 3) Maintain a late-winter calf:cow ratio of 40:100.
- 4) Provide an annual elk harvest of 175 (100 antlered and 75 antlerless). This harvest rate will be increased when the population objective is reached.
- 5) Manage for a bull harvest consisting of 50% BTBs and at least 15% six-point bulls.
- 6) Provide 15,000 recreation days for 2,000 elk hunters annually.

POPULATION MANAGEMENT STRATEGIES

The general elk hunting season will be regulated to accommodate an increasing and expanding elk population while maintaining current levels of calf production and improving observed bull:cow ratios and the proportion of older aged bulls in the population. Because the majority of the area (95%) is USFS land and crop depredation is not a problem on the remaining private lands, the elk population will be allowed to expand to occupy all suitable habitats.

Regulations: Current hunting season regulations provide one week of antlerless elk hunting followed by four weeks of any-bull hunting. This season provides hunters with an opportunity to hunt antlerless elk without a special permit, while taking some of the pressure off the bull segment of the population. Existing elk hunting regulations, implemented in 1988, are experimental. Changes in hunting regulations such as shortened antlerless seasons, antlerless permits or earlier opening and closing dates for the general season may be necessary to achieve population objectives.

GAME DAMAGE STRATEGIES

Elk depredation is not a problem in this EMU.

SALISH EMU

(Hunting Districts 101, 102, 103, 120, 122, 124)

Description: The Salish EMU is located in northwestern Montana, encompassing about 3,800 square miles of land between Eureka and the Flathead Indian Reservation. This unit encompasses the western portion of the Flathead National Forest, the eastern portion of the Kootenai National Forest and the northwest portion of the Lolo National Forest. More than half of the land base is owned and managed by large timber corporations and 40% is managed by the USFS and other public agencies.

Public Access: Most areas are easily accessed by road. Tracts of lands in mixed ownership have high open-road densities, offering extensive roaded hunting opportunities.

Elk Populations: The elk population is about 2,300, based on the current annual elk harvest of 400 (a 17% harvest rate). High road densities have resulted in low elk security levels, but timber harvest has enhanced the yearlong carrying capacity of elk habitat. Recent transplants of elk include 41 in 1981, 34 in 1987 and 21 in 1988.

Recreation Provided: This unit provides 46,750 days of hunting recreation for about 5,800 hunters annually. Elk viewing opportunities are limited.

Current Annual Elk Harvest: 400. The average number of BTBs in the harvest has declined in recent years. Yearlings currently comprise 42% of the total bull harvest with 6-point or larger bulls comprising about 13%.

SUMMARY OF PUBLIC COMMENT

Public comment indicated a desire for changes in the management of elk populations and elk habitats. Support was indicated for more road closures and some sex and antler-point restrictions on the harvest - if restrictions are necessary to accomplish population objectives. Strong opposition to road closures was also heard. Public comment also indicated a desire for expansion of the block management program. Although hunters expressed a desire for the opportunity to harvest an elk for meat, they also expressed a desire for improved opportunities to harvest older bulls.

MANAGEMENT GOAL

Increase elk populations by 30%, manage for high productivity and survival and cooperate in the management of elk habitat to provide maximum hunter opportunity to harvest elk.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 2.2 million acres of occupied elk habitat.

- 2) Maintain elk security so that no more than 50% of the bull harvest occurs during the first week of the antlered hunting period.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with land management agencies, corporate timberland managers and private landowners to pursue the following habitat strategies:

- Provide elk security needs through maintenance of hiding cover, secure travel corridors and planning of road systems.
- Ensure maintenance of needed habitat components on elk winter ranges.
- Develop walk-in recreation in the following areas: Sutton Mountain, Cedar Creek, Ketowke Mountain, Pleasant Valley, Blacktail Mountain and Murr Peak.
- Achieve a maximum open-road density of 1.5 miles per section during hunting season and a maximum open-road density of 1.7 miles per section during the remainder of the year.
- Design and implement a winter range enhancement program in cooperation with the USFS.

POPULATION OBJECTIVES

- 1) Increase elk numbers by 30%, from 2,300 to 2,990.
- 2) Maintain an observed winter bull:cow ratio of at least 10 per 100.
- 3) Maintain a minimum winter calf:cow ratio of 30 per 100.
- 4) Provide a minimum annual harvest of 400 elk (200 antlered and 200 antlerless) after the population goal of 2,990 is attained.
- 5) Maintain an annual bull harvest comprised of at least 30% BTBs, 5% of which are 6-point bulls.
- 6) Provide 33,000 recreation days annually for 4,750 hunters.

POPULATION MANAGEMENT STRATEGY

Elk populations will be managed for current population productivity and composition and a 30% increase in elk numbers

Regulations: The current elk harvest is regulated with five weeks of any-bull hunting in most of the hunting districts. In the Pleasant Valley/Fisher River district, the first week of the season is antlerless-only and the remaining four weeks are any-bull. In the Arvilla district (south of Plains) the season regulations also include a limited number of antlerless permits. When the population objective of 2,990 is reached, it may be necessary to issue antlerless permits to

stabilize the population and antler point restrictions may be necessary to accomplish population objectives for bulls.

GAME DAMAGE STRATEGY

Winter distribution of elk in the vicinity of private ranches near Hubbard Reservoir and Pleasant Valley will be monitored. If game damage occurs, appropriate remedial action will be implemented according to DFWP's game damage policy. Hunting pressure and harvest will be directed to problem areas in HD 124 through the use of antlerless elk permits.

ACCESS OBJECTIVE

Maintain open-road densities to provide a variety of roaded hunting opportunities.

ACCESS STRATEGIES

DFWP will:

- Encourage public and private land managers to maintain access and travel management programs designed to reduce open-road densities to levels compatible with maintaining or enhancing the existing array of hunting experiences available in this EMU.
- Encourage land managers to maintain an open-road density of 1.7 miles per section with consideration given to seasonal and yearlong closures and an open-road density of 1.5 miles per section during hunting season.

BITTERROOT EMU
(Hunting Districts 240 and 260)

Description: The 946-square-mile Bitterroot EMU is located in western Montana on the west side of the Bitterroot Valley. More than 80% of the land base is administered by the Lolo and Bitterroot national forests, with a majority of the backcountry in the Selway-Bitterroot Wilderness. The majority of the valley floor, however, is in private ownership.

Public Access: There is good public access to every drainage in HD 240 but access into the backcountry is limited to travel by foot or horseback. Public access to private lands along the Bitterroot River in HD 260 is limited.

Elk Populations: Due to a series of mild winters and control of the antlerless harvest through the use of antlerless permits, the elk population is currently at a modern-day high of 850-950. Elk security is good to excellent because of the ruggedness of Wilderness terrain. The capacity of available elk winter range is limited by its general east slope exposure, tree canopy coverage and the presence of subdivisions.

Recreation Provided: This unit provides 12,000 days of hunting recreation for about 2,000 hunters annually. Wildlife viewing and photography are major uses of the elk population during the summer. Opportunities for viewing elk on winter ranges are available at McClain Creek, Brooks Creek and Sweathouse Creek (Victor Hill).

Current Annual Elk Harvest: Average of 185.

SUMMARY OF PUBLIC COMMENT

Public comment indicated a strong preference for maintaining the existing diversity of hunting experiences available in this unit; a desire to improve the opportunity to harvest older bulls, and concern that postseason bull:cow ratios are too low. The public also voiced strong support for establishing cooperative programs between public and private land managers to maintain and improve elk security. Specifically, many comments favored additional road closures.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at current population levels and cooperate in the management of elk habitat to provide a diversity of hunting experiences and diverse elk harvests.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 496,640 acres of occupied elk habitat.

- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 35 % of the bull harvest occurring during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with state and federal land management agencies to pursue the following habitat strategies:

- Design and implement a cooperative winter range habitat enhancement program.
- Improve consideration of elk security requirements (elk security areas and secure travel corridors) in the planning and design of timber sale cutting units and road systems, particularly in remaining roadless areas adjacent to winter ranges where bulls become vulnerable to hunting pressure with the onset of snow accumulation (such as Brooks Creek, Mill Point and Ward Mountain).
- Implement road management on winter ranges to improve elk security (including the McClain Creek and Mormon Creek wintering areas, the Brooks Creek winter range and the Sweathouse/Gash Creek winter range).
- Identify areas where road closures are necessary to protect elk security and work with land managers to reduce open-road densities where necessary.
- Establish a schedule to burn 100 acres of winter range annually to reduce tree canopy coverage, stimulate growth of browse species and increase available winter forage.

POPULATION OBJECTIVES

- 1) Maintain a stable late-winter elk population of 700-800.
- 2) Maintain an observed late-winter bull:cow ratio of at least 15 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 40-50 per 100.
- 4) Provide an annual harvest of 120 antlered and 100 antlerless elk.
- 5) Maintain elk population composition to accommodate an annual bull harvest comprised of 100% BTBs, including at least 15 % 6-point bulls.
- 6) Provide 12,000 hunting recreation days annually for approximately 2,000 elk hunters.

POPULATION MANAGEMENT STRATEGY

DFWP will continue to work with public and private land managers to maintain and improve elk security areas, particularly on and adjacent to winter ranges where bulls become vulnerable

with the onset of snow accumulation. Additional road closures will be considered where appropriate.

Regulations: 1991 marked the first year of a BTB hunting regulation and use of A-7 licenses in HD 240. These new hunting regulations will be monitored and evaluated to determine their impact on the bull harvest, bull:cow ratios and antlerless harvest objectives. Archery-only hunting will be continued in HD 260. If elk use of the area becomes more consistent, an either-sex archery-only season will be recommended.

GAME DAMAGE STRATEGY

DFWP will reduce game damage in the Brooks Creek and McClain - Mormon Creek areas to levels that are tolerable to private landowners. It may be necessary to utilize antlerless permits valid for the north portion of HD 240 to direct hunting pressure and harvest to areas where game damage problems are occurring.

ACCESS STRATEGY (to maintain hunting access at current levels):

DFWP will assist landowners with hunter management through establishment of walk-in areas or, where appropriate, block management agreements.

DEER LODGE EMU

(Hunting Districts 215, 818 and 835)

Description: This 999-square-mile EMU is bounded by Deer Lodge, Boulder, Butte and Helena. The Deerlodge and Helena national forests are the major public landowners, administering about 45% of the unit's land base. The remaining lands are in private, state or BLM ownership.

Public Access: This unit is extensively roaded with approximately 95% of elk hunting areas within one mile of an open road. Due to its proximity to Helena, hundreds of acres of subdivisions and unregulated housing have been built on traditional winter ranges in HD 835. Most of HD 818 is characterized by extensive timber harvest and roading.

Elk Populations: The elk population of this unit currently numbers about 2,350, which includes a substantial population increase in HD 215. Elk security is generally good to excellent in about 20-40% of the unit. However, elk security, particularly for bulls, has declined on some privately owned winter ranges.

Recreation Provided: The unit currently provides 28,100 days of hunting recreation to 4,100 hunters annually. Summer and winter recreational opportunities include photography and wildlife viewing.

Current Annual Elk Harvest: 550 (250 antlered and 300 antlerless).

SUMMARY OF PUBLIC COMMENT

Limited public comment indicated support of the current management direction. Some people thought that elk numbers are too high, causing a burden to landowners.

MANAGEMENT GOAL

Manage the elk population in a healthy condition and at current levels in HDs 818 and 835, reduce elk numbers in HD 215 (between Cottonwood and Telegraph creeks) by 33% and cooperate in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 639,360 acres of elk habitat.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 40% of the bull harvest occurring during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will work with state and federal land management agencies to pursue the following habitat strategies:

- Design and establishment of a winter range enhancement program in cooperation with USFS.
- Planning and design of timber sale cutting units and road management systems with emphasis on maintaining elk security areas and secure travel corridors, particularly in remaining roadless areas.
- Coordination with the Deerlodge National Forest in its Landscape Level Analysis, which includes update of the Basin, Cataract and Boulder Chief AMPs and cumulative effects for various elk herd units.
- Cooperation in the review of Cliff Mountain AMPs with the goal of improving range conditions.
- Cooperative efforts with the Helena National Forest regarding elk security for bulls in the Little Blackfoot drainage.
- Identification of areas where road closures are needed to improve elk security and cooperation with land managers to reduce current open-road densities where necessary.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 2,050 elk. Elk numbers in HD 215 will be reduced 33% (between Cottonwood and Telegraph creeks), from 600 to 400.
- 2) Maintain an observed late-winter bull:cow ratio of at least 12-15 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 35-45 per 100.
- 4) Provide an annual harvest of 250 antlered and 300 antlerless elk.
- 5) Maintain a bull harvest comprised of 100% BTBs in HDs 215 and 818, and 45% BTBs (including at least 5-10% 6-point bulls) in HD 835.
- 6) Provide 28,100 days of hunting recreation annually for 4,100 hunters.

POPULATION MANAGEMENT STRATEGY

Work will continue with private and public land managers to maintain and improve elk security, particularly on and adjacent to winter ranges where bulls become vulnerable with the onset of snow accumulation. Additional road closures will be considered where appropriate.

Regulations: The recommended hunting season regulations include the current five-week any-bull season with antlerless permits in HD 835 and a BTB regulation in HDs 215 and 818. These

hunting regulations will maintain good opportunities to hunt and harvest elk and should result in bull:cow ratios that meet or exceed population objectives. The BTB regulation in HDs 215 and 818 will be monitored to evaluate its effectiveness in improving bull:cow ratios and its effect on the older bull segment.

GAME DAMAGE STRATEGIES

To reduce game damage on privately owned lands located between Cottonwood Creek and Telegraph Creek to tolerable levels, harvest pressure will be directed specifically to elk using private lands to reduce their numbers.

Antlerless permits valid only on private lands from Sept. 1 - Dec. 15 will be issued for HD 215. HD 215 has been split into portions, with the majority of antlerless permits directed to the portion where chronic depredations occur. Extended antlerless elk seasons and special late seasons are being conducted and will be monitored to evaluate their effectiveness.

ACCESS STRATEGY (to maintain current levels of public hunting access to private lands in HDs 818 and 835 and increase access in HD 215):

DFWP will assist landowners with hunter management, utilizing block management agreements and walk-in areas where appropriate.

FLINT CREEK EMU

(Hunting Districts 212 and 213)

Description: This 794-square-mile EMU encompasses the Flint Creek range between Deer Lodge and Philipsburg. Nearly half of the land base is in private ownership. The Deerlodge National Forest administers approximately 42% of the land base.

Public Access: This unit is characterized by extensive roading, associated primarily with past mining activity. About 80% of the unit is open to public hunting, 10% is moderately open and 10% is closed. More than 90% of the land area is within one mile of an open road.

Elk Populations: The 1,400 elk inhabiting this unit benefit from good to excellent elk security in 60-80% of the unit. The elk population in HD 213 is currently at a modern-day high. The population in the northern portion of HD 212 was reduced significantly in 1985 through a trapping and transplanting program to control extensive crop damage caused by a substantial elk population increase on a large ranch where no hunting is allowed. Current management is directed at holding the population at its current level.

Recreation Provided: The unit provides 9,562 days of hunting recreation annually to about 1,300 hunters. Summer and winter recreational use of the Flint Creek range includes photography and wildlife viewing.

Current Annual Elk Harvest: 260 (180 antlered and 80 antlerless).

SUMMARY OF PUBLIC COMMENT

Limited public comment indicated a desire to reduce elk numbers, increase the number of mature bulls in the herd and improve elk security levels through the use of road closures.

MANAGEMENT GOAL

Manage elk populations in a healthy condition at current population levels and cooperate in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 496,000 acres of occupied elk habitat.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 40% of the bull harvest occurring during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with state and federal land management agencies to pursue the following habitat strategies:

- Design of a winter range enhancement program in cooperation with the USFS.
- Planning and design of timber sale cutting units and road management systems to maintain elk security areas and secure travel corridors, particularly in remaining roadless areas.
- Coordination with the Deerlodge National Forest in its planning efforts to address cumulative effects on an elk herd unit basis, starting with the northern Flint unit in upper Gold and Douglas creeks.
- Coordination with the Deerlodge National Forest and State Prison regarding elk security in the area above the State Prison Ranch.
- Monitoring of subdivision development, ski area development and logging activity, and assessment of their impacts on elk habitat in the North Fork of Flint Creek area.
- Maintenance of the Dunkleberg walk-in area with particular emphasis on the Douglas Mountain winter range.
- Identification of areas where road closures are needed to enhance elk security and cooperation with land managers to reduce open-road densities where necessary.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 1,400 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 35 per 100.
- 4) Provide an annual harvest of 180 antlered and 110 antlerless elk.
- 5) Maintain a bull harvest comprised of at least 30-40% BTBs including at least 10% 6-point bulls.
- 6) Provide 9,562 days of hunting recreation annually for 1,300 hunters.

POPULATION MANAGEMENT STRATEGY

DFWP will continue working with private and public land managers to maintain and improve elk security, particularly on and adjacent to winter ranges where bulls become vulnerable with the onset of snow accumulation. Additional road closures will be considered where appropriate. Current management efforts are directed at improving hunting access to the eastern portion of HD 213 to facilitate increased harvest on this expanding herd.

Regulations: Recommended hunting season regulations include the current five-week any-bull regulation with antlerless permits. With the elk security available in the Flint Creek Range, these regulations should maintain good opportunities to hunt and harvest elk and maintain bull:cow ratios.

GAME DAMAGE STRATEGY

To minimize the potential for game damage and prevent elk depredation along the east and north face of the Flint Creek Range from exceeding landowner tolerance, harvest pressure will be directed specifically to sub-populations responsible for game damage on private lands to reduce their numbers. If elk numbers increase in the areas of the State Prison Ranch or the northern portion of HD 212, the number of antlerless permits will be increased. This hunting district will remain split in order to direct hunting pressure and harvest to problem areas.

ACCESS STRATEGY (to increase hunting access to private lands by 5% and encourage public land managers to maintain current access through private property to public lands):

DFWP will assist landowners with hunter management and where appropriate, establish block management agreements and walk-in hunting areas.

GARNET EMU

(Hunting Districts 283, 290, 291 and 292)

Description: This 1,517-square-mile EMU is located within the Blackfoot and Clark Fork river drainages, east of Missoula. It encompasses the Rattlesnake Wilderness and National Recreation Area. Land ownership varies widely among hunting districts in the unit, with large blocks of corporate and private agricultural ownership, as well as substantial public acreage. About 30% of the unit is administered by the BLM and Lolo National Forest. The area is characterized by more intensive timber management than is generally found in surrounding EMUs.

Public Access: This unit is extensively roaded and largely open for public use, with a few isolated, sparsely roaded or roadless elk security areas. The Rattlesnake Wilderness and National Recreation Area is the most extensive elk security area in the unit. The USFS, BLM, DSL and corporate and private landowners have established road management programs in cooperation with DFWP that partially mitigate security losses resulting from timber management activities. Because of its proximity to Missoula, the area receives heavy hunting pressure.

Elk Populations: Because of antlerless harvest restrictions (regulated by special permit since 1980), and recent mild winters, elk populations are at a modern-day high. Best estimates place the population at about 3,000.

Recreation Provided: This unit provides about 33,000 days of hunting recreation annually to about 5,200 hunters. Wildlife viewing and nature photography are the major uses of the elk population during the summer, particularly in the Rattlesnake Wilderness. Elk can also be seen along road sides during winter and spring.

Current Annual Elk Harvest: 776 (440 antlered and 336 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated a preference for maintaining the current management goal for this unit. For HD 291, however, there is a preference for enhancing the diversity of the age structure of the bull population to provide improved opportunities to harvest older bulls. In HDs 283 and 290, comments indicate a desire to manage the herd for maximum harvest opportunities. Game damage problems, particularly in HDs 290 and 292, are a major concern. Many suggested a need to increase the antlerless harvest to address those problems. The public has also voiced support for improving elk security levels, especially on corporate-owned timber lands. Support was also expressed for improving public access to private lands in HD 290. Support was expressed for road closures and establishment of walk-in hunting areas.

MANAGEMENT GOAL

Maintain current elk population numbers and provide the maximum sustainable annual elk harvest.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 890,880 acres of elk habitat.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 40% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with state and federal land management agencies, corporate land managers and private landowners to pursue the following habitat strategies:

- Multi-agency planning, cumulative effects analyses and coordination in areas where several land management entities share management responsibility for an elk herd range.
- Coordination in the planning of timber sales, road management and enforcement.
- Management of walk-in hunting areas in the vicinity of Arkansas/Ashly Creek, Chamberlain Creek, Blanchard Creek, Bonner Mountain, the Dutton Ranch, Gold Creek-Sunflower Mountain, Morrison Peak, Cramer Creek and Warm Springs.
- Maintenance of elk security levels in the vicinity of the Hoodoo Mountain roadless area (East Garnets) and the Chamberlain walk-in area.
- Expanded assistance to private landowners in developing elk management programs.
- Identification of areas where road closures are needed to enhance elk security and cooperation with land managers to reduce open-road densities where necessary.

POPULATION OBJECTIVES

- 1) Maintain a stable late-winter population of about 3,000 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 30 per 100.
- 4) Provide an annual harvest of about 350 antlered and 350 antlerless elk.
- 5) Maintain a bull harvest comprised of at least 25% BTBs.
- 6) Provide about 33,000 days of hunting recreation annually for approximately 5,200 hunters.

POPULATION MANAGEMENT STRATEGY

By concentrating hunting pressure on accessible problem areas, migratory herds in more remote habitats may be increased without causing negative impacts to landowners. Efforts will be made to open more private lands for public hunting to increase the effectiveness of special game damage hunts, as well as to enhance hunting opportunity.

Regulations: Recommended season regulations include the current five-week any-bull hunting season with the antlerless harvest regulated by use of antlerless licenses. HD 290 remains a special situation with extensive private land and many residences and ranch buildings. In the interest of public safety, hunting in HD 290 will be archery-only for antlered bulls during the general season, with the antlerless harvest regulated by permit.

GAME DAMAGE STRATEGY

To reduce game damage to tolerable levels in the vicinities of Ninemile Prairie, south of Potomac (HD 290 and along the north side of HD 291), DFWP will direct hunting pressure to subpopulations using private lands to reduce their numbers, while allowing migratory herds that do not cause damage to remain at current levels or increase as appropriate. Antlerless permits valid for portions of hunting districts will be used to direct hunting pressure and harvest toward specific depredating populations.

ACCESS STRATEGY (to increase hunting access to private lands by 5% and maintain current levels of hunting access to public lands):

DFWP will initiate block management agreements with private landowners where appropriate. To encourage public and corporate landowners to maintain current levels of public access, DFWP will maintain close communication with land managers, provide enforcement on cooperatively managed hunting areas and promote the public relations benefits of public access to corporate landowners.

LOWER CLARK FORK EMU

(Hunting Districts 104, 121, 123, 200 and 202)

Description: This 2,758-square-mile EMU lies along the Montana-Idaho border in northwestern Montana, bounded by the Cabinet and Bitterroot mountains. More than 70% of the land base is administered by the Kootenai and Lolo national forests. The recently acquired 1,552-acre Mount Silcox Wildlife Management Area is part of the unit.

Public Access: Roads currently provide moderate levels of vehicle access to much of the unit. With the exception of the Cabinet Mountains Wilderness and the proposed Great Burn and Scotchman Peak Wilderness areas, construction of logging roads will provide hunter access to most of the remaining areas within 10 years. The national forests, however, have established road management systems that limit vehicle access.

Elk Populations: An elk population numbering about 5,700 seasonally occupies every drainage in the unit. The quality of elk winter ranges is declining due to conifer encroachment and aging of shrub fields. Although the majority of elk use is on USFS lands, elk also utilize private lands throughout the year. Most game damage reports are registered during the spring and summer.

Recreation Provided: This unit provides 63,000 days of hunter recreation annually to about 8,500 hunters. From winter through spring, elk may be readily viewed from highways and county roads near St. Regis and Thompson Falls, including the following locations: Cherry Creek, Dry Creek, Little Beaver Creek, Prospect Creek, West Fork of Elk Creek and Boyd Mountain. During summer visits to backcountry areas, many recreationists view and photograph elk and other wildlife species.

Current Annual Elk Harvest: 1,100

SUMMARY OF PUBLIC COMMENT

The public expressed support for maintaining the current recreational character of the unit but would like to see more bulls reach older age classes. Support was voiced for additional road closures and more aggressive habitat management actions directed toward enhancement of elk winter range and protection of elk security areas. Comments protesting additional road closures were also received. Landowners expressed concern about levels of elk use on private lands. Some concern was expressed that bow hunters may be adversely affecting elk populations by either harvesting too many bulls or disturbing the rut and lowering reproductive success. Many respondents also believed the number of outfitters is becoming incompatible with non-outfitted recreational use.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at population levels established in the Lolo and Kootenai Forest Land and Resource Management Plan for HDs 104 and 121, with emphasis on maintaining a diverse bull age structure and cooperation in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 1.8 million acres of currently occupied elk habitat.
- 2) Maintain or enhance elk security so the elk harvest is distributed throughout the season, with no more than 40% of the annual bull harvest taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with state and federal land management agencies to pursue the following habitat strategies:

- Planning and design of timber sale cutting units and road management systems to maintain elk security areas and secure travel corridors, particularly in remaining roadless areas and on winter ranges where bulls become vulnerable to hunting pressure with the onset of snow accumulation. Protection of existing roadless areas in Trout Creek, Cataract Creek, Jack's Gulch, Pellick Ridge and drainages around Mount Bushnell is a DFWP priority because these areas provide important upper-elevation security areas during the summer and fall seasons.
- Protection of the Little Beaver Creek and Squaw Creek wintering areas in the central portion of the unit will also be a priority in the event that current land ownership or ranch management philosophy changes.
- Establishment of a schedule to treat 1,500 acres of winter range annually with prescribed burning, to include these areas: the Boyd Mountain, Donlan, Mayo Gulch, Graham Gulch, Cherry Creek, Gold Rush Creek, West Fork Dry Creek, Wilkes Creek, Cooper Gulch, Daisy Creek, Clark Mountain, Knox Creek, Prospect Creek drainages, East Fork Crow Creek, Mosquito Creek, Squaw Creek, Little Beaver Creek, Trout Creek, Vermillion River, Green Mountain, Marten Creek, Lone Cliff, Elk Creek, Gin Gulch, Smokey Gulch, Honey Moon Creek, Liver Ridge, Thorne Creek, Winniemuck Creek and the Twenty Peaks areas.
- Identification of areas where road closures are needed to enhance elk security and cooperation with land managers to reduce open-road densities where necessary.
- Continued coordination with the Lolo National Forest on timber harvest planning in the Mount Bushnell area to include implementation of the following strategies: 1) deferral of the interior until the next century; 2) retention of adequate hiding cover (25-30%

minimum) in all subunits; 3) restriction of roads to individual subunits with no tie-throughs; 4) timber harvest timing that avoids back-to-back harvest and loss of displacement areas and 5) road closures on all new road systems. DFWP will also encourage consideration of an amendment to the management strategy that would substitute temporary for permanent roads.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 5,300 elk, a reduction of 7% (400) from current numbers. This reduction is targeted for areas in the Clark Fork Valley where elk depredation on private lands is a concern.
- 2) Maintain an observed late-winter bull:cow ratio of 15-19 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 25-30 per 100.
- 4) Provide an annual harvest of 620 antlered and 550 antlerless elk.
- 5) Maintain an annual bull harvest comprised of 40% BTBs, of which 10% are 6-point bulls.
- 6) Provide 51,000 days of hunting recreation annually for approximately 7,500 elk hunters.

POPULATION MANAGEMENT STRATEGIES

- Work will continue with private and public land managers to maintain or improve elk security, particularly on and adjacent to winter ranges where bulls become vulnerable with the onset of snow accumulation. Additional road closures will be recommended where appropriate.
- A bull ecology study in the Jack's Gulch area may be developed, with emphasis on the mature bull segment of the population. Objectives would include identification of key security areas, migration patterns, harvest rates, major travel corridors and seasonal habitat use.
- Population monitoring will be improved and expanded through methods being evaluated in the Lower Clark Fork elk study.

Regulations: Recommended season regulations include the current five-week season, a portion of which will be either-sex where possible, with antlerless permits in hunting districts offering lower security. Antlerless elk permits for HD 121 will be used to achieve population objectives and help reduce elk depredation. Elk security levels are adequate to allow targeted bull:cow ratios to be met in the near future. However, if elk security declines, especially adjacent to winter ranges, excessive harvest of bulls could result in lower bull:cow ratios than desirable.

GAME DAMAGE STRATEGY

Adopt harvest strategies to reduce elk populations where chronic elk depredation occurs. The population objective for this unit reflects a proposed population reduction in those areas experiencing chronic crop damage. Scheduled antlerless-only seasons beginning Sept. 1 in the Boyd Mountain, Trout-Quartz Creek and Marble Creek areas will be used to reduce population segments responsible for depredations. Antlerless permits valid for portions of HDs 200 and 202 will continue to direct hunting pressure and harvest toward problem areas.

ACCESS STRATEGIES (to maintain current levels of hunting access):

- Pursue additional walk-in access on the north side of Pellick Ridge and on the south side of Green Mountain.
- Continue to support efforts to maintain the Trout Creek road, which is currently subject to jurisdictional litigation, in public ownership. If the courts rule that the road is private, both walk-in and vehicle access will be difficult.

NINEMILE EMU

(Hunting Districts 201 and 203)

Description: This 1,055-square-mile EMU lies west of Missoula and borders the southwest boundary of the Flathead Indian Reservation. About 60% of the area is administered by the Lolo National Forest and approximately 15% is owned by corporate timber companies.

Public Access: Roads constructed for timber harvest and BPA powerline construction provide access to most of the unit. Construction of logging roads is expected to access the remaining roadless areas within the next 10 years. The most easily accessed portions of the unit offer short day excursions by vehicle or on foot.

Elk Populations: About 2,000 elk seasonally occupy every drainage in the Ninemile EMU. Elk numbers have increased substantially over the past 10 years. The quality of winter range is declining however, as shrub fields age and are invaded by conifer reproduction.

Recreation Provided: This unit provides 26,000 days of hunting recreation annually to about 3,900 hunters. Winter, spring and summer wildlife viewing and nature photography opportunities are available in several areas, including excellent elk viewing opportunities in the Ninemile and Lolo Creek areas.

Current Annual Elk Harvest: 300 (200 antlered and 100 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated strong support for the current goal of providing a diversity of elk hunting experiences, but some believe the elk population should be increased while others think the population should be reduced to thwart increasing game damage incidents. The public also expressed a desire for better opportunities to harvest older bulls and increased efforts to protect elk security through additional road closures.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at current population levels and cooperate in the management of elk habitat to optimize a diversity of elk hunting experiences and a diverse elk harvest.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 662,400 acres of occupied elk habitat.

- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 40% of the bull harvest occurring during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

The DFWP will cooperate with state and federal land management agencies to pursue the following habitat strategies:

- Planning and design of timber sale cutting units to maintain elk security and secure travel corridors, particularly in remaining roadless areas and on or adjacent to winter ranges where bulls are vulnerable to hunting pressure with the onset of snow accumulation.
- Evaluation of proposed timber harvest activities in the currently roadless Bear Creek, Deep-Gilman and Ninemile Divide areas with respect to potential impacts on elk security.
- Establishment of a schedule to burn 300 acres of winter range annually in the Burdette Creek drainage.
- Encourage protection of important elk winter ranges from development (O'Brian Creek is particularly vulnerable at this time).
- Identification of areas where road closures are needed to enhance elk security and work with public land managers to reduce open-road densities by at least 5% from existing conditions. The Lolo National Forest has established road management programs to help mitigate elk security losses.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 2,000 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 30 per 100.
- 4) Provide an annual harvest of 200 antlered and 175 antlerless elk.
- 5) Maintain an annual bull harvest comprised of 30% BTBs.
- 6) Provide 20,000 hunter recreation days annually for approximately 3,700 elk hunters.

POPULATION MANAGEMENT STRATEGY

Work will continue with private and public land managers to maintain and improve elk security, particularly on and adjacent to winter ranges where bulls become vulnerable with the onset of snow accumulation. Additional road closures will be recommended where appropriate.

Regulations: Recommended season regulations include the current five-week any-bull season with the antlerless harvest regulated with antlerless permits. This regulation will maintain good opportunities to hunt and harvest elk. However, if elk security declines, especially adjacent to winter ranges, excessive harvest of bulls could result in lower than desirable bull:cow ratios.

GAME DAMAGE STRATEGY

An annual antlerless-only hunting season in the Four Mile area (beginning Sept. 1) will be used to harvest elk responsible for depredations. Antlerless permits valid for portions of both hunting districts will continue to be used to direct hunting pressure and harvest to problem areas.

ACCESS STRATEGY (to maintain current levels of hunting access to public and private lands):

DFWP will establish walk-in hunting areas or block management agreements where appropriate and evaluate existing walk-in hunting areas.

ROCK CREEK EMU

(Hunting Districts 204, 210, 216 and 261)

Description: This 1,480-square-mile western Montana EMU, bisected by the Rock Creek drainage and encompassing the northern portion of the Sapphire Mountains and the Welcome Creek Wilderness, lies southeast of Missoula. Approximately 63% of the land area is administered by the Bitterroot, Deerlodge and Lolo national forests with roughly 33% of the remaining land area in private ownership.

Public Access: Approximately 95% of the unit is open to public hunting. Between 60% and 93% of the area is within one mile of an open road.

Elk Populations: Approximately 2,200 elk inhabit the unit. Elk security is considered good to excellent in 30 - 50% of the unit. The elk population in HD 204 has increased during the past five years. Current management direction is to continue this increase because there is little potential for depredation problems and winter forage is available to accommodate more elk. Elk numbers must be reduced in the southern portion of HD 261, where there are serious depredation problems. Landowner tolerance for elk on private lands will be a major factor in management of elk in HD 216. Current management direction in HD 210 is to maintain current population levels and provide elk security through establishment of road closures.

Recreation Provided: This EMU provides 21,283 days of hunting recreation annually to about 3,500 hunters. Summer and winter recreational use includes photography and elk viewing.

Current Annual Elk Harvest: 530 (250 antlered and 280 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated general satisfaction with the current management goal of providing a diversity of hunting experiences in the unit. Interest was also expressed in improving bull:cow ratios and for enhancing the opportunity to harvest older bulls. The public voiced support for reducing the antlerless portion of the population, especially in HD 261. Comments also supported improvement of elk security, including additional road closures in some areas. Many comments focused on a need to improve public access to private lands to render hunting as a means to effectively manage game damage.

MANAGEMENT GOAL

Manage the elk population in a healthy condition and cooperate in the management of elk habitats to provide a diversity of elk hunting experiences. Elk populations will be managed to maintain current numbers in HDs 210 and 216, a reduction in numbers in the south half of HD 261 and a population increase in HD 204.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 889,600 acres of occupied elk habitat.
- 2) Maintain elk security levels so that elk harvest is distributed throughout the hunting season, with no more than 30% of the bull harvest occurring during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will work with state and federal land management agencies to pursue the following strategies designed to maintain or improve elk security:

- Cooperation with the Lolo and Bitterroot national forests in the Sapphire Divide cumulative effects analysis and establishment of additional road closures in the Ambrose Saddle vicinity to compensate for inadequate elk security.
- Evaluation of elk security problems in the upper St. Clair Creek and Skalkaho Mountain areas and review of potential road closures with personnel of the Bitterroot National Forest and local sportsperson groups.
- Evaluation of proposed timber harvest in the currently roadless Harvey-Eight Mile and Duncie Creek areas and its potential impacts on elk security.
- Maintenance of the Miller-Spooner walk-in area.
- Management of the Spring-Brewster-Gillespie Creek area to recognize the high vulnerability of bulls in this key migration area.
- Identification of areas where road closures are necessary to enhance elk security and cooperation with land managers to reduce open-road densities where necessary.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of about 2,200 elk, offsetting planned population reductions in the south half of HD 261 with a population increase in HD 204 north of Ambrose Creek. Elk numbers will be maintained at current levels in HDs 210 and 216.
- 2) Maintain an observed late-winter bull:cow ratio of at least 15 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 35-45 per 100.
- 4) Provide an annual harvest of 200 antlered and 300 antlerless elk.
- 5) Maintain an annual bull harvest comprised of at least 40-50% BTBs and at least 10% 6-point bulls in HDs 210 and 216, and 100% BTBs in HDs 204 and 261.
- 6) Provide 21,283 days of hunting recreation annually for 3,530 hunters.

POPULATION MANAGEMENT STRATEGIES

Work will continue with private and public land managers to maintain and improve elk security, particularly on and adjacent to winter ranges where bulls become vulnerable with the onset of snow accumulation. Additional road closures will be considered where appropriate.

Numbers of antlerless permits or A-7s will be adjusted in relation to changes in population trend in order to maintain stable populations in HDs 210 and 216, an increasing population in HD 204 and the north half of HD 261, and to reduce the population in the southern half of HD 261.

Regulations: Recommended hunting regulations include the current five-week season with the antlerless harvest regulated with antlerless permits in HDs 210 and 216 and with A-7s during a five-week BTB season in HD 261. HD 204 features a BTB season format. The use of A-7 licenses will be evaluated with regard to meeting population objectives. The 11,000-acre Combination Fire of 1988 in the southcentral portion of HD 210 and subsequent salvage cuts in this area will undoubtedly affect elk distribution and possibly elk harvest rates.

GAME DAMAGE STRATEGIES

To reduce game damage between Willow Creek and Skalkaho Creek and in Willoughby Creek in HD 261, and Greyhorse Creek in HD 204, antlerless permits valid for portions of HDs 210, 216 and 261 will be used to direct hunting pressure and harvest to problem areas. Antlerless permits valid Sept. 1 will continue to be issued for private lands in HDs 210 and 216 to reduce late summer-early fall elk depredation. DFWP will explore the potential for implementing a rest-rotation grazing system on a portion of the Three Mile WMA and adjacent private lands to the south to improve soils and vegetation on elk winter range in state and private ownership and improve landowner tolerance for elk use of private lands.

ACCESS STRATEGY (to increase hunting access to private lands by 5% and maintain current levels of hunting access to public lands):

DFWP will assist private landowners with hunter management, utilizing block management agreements and establishment of walk-in hunting areas where appropriate.

SAPPHIRE EMU

(Hunting Districts 211, 214, 250, 270 and 321)

Description: This 2,692-square-mile EMU encompasses an area of southwestern Montana extending from Anaconda to the Idaho border southwest of Darby. It includes the drainage heads of the Big Hole and Bitterroot rivers and Rock Creek and a large portion of the Anaconda-Pintler Wilderness. More than 80% of the land base is administered by the Bitterroot, Deerlodge, and Beaverhead national forests.

Public Access: The major portion of this elk management unit is moderately roaded, offering good public access. The northern half of HD 270 and portions of HD 250 are heavily roaded and contain many "loop" roads. This unit also encompasses some relatively large blocks of roadless security areas, several of which are outside the Anaconda-Pintler Wilderness boundary.

Elk Populations: This elk population, which numbers about 3,500, has increased since the early 1980s. The majority of the unit is characterized by good elk security. The bull component of the population is characterized by a diverse age structure.

Recreation Provided: This unit provides 47,500 days of hunting recreation annually to about 6,000 hunters. There are opportunities to view elk on winter ranges in the Sula Basin and in Rock Creek during winter and spring. Viewing and photography make up the majority of elk-related recreation during the summer.

Current Annual Elk Harvest: 975 (550 antlered and 425 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated support for maintaining the current management goal of providing a diversity of hunting experiences and harvest opportunities. There is also interest in managing for more mature bulls in the Bitterroot portion of the unit, through additional road closures and more restrictive hunting regulations. Comments opposing additional road closures were also received. The public voiced strong support for establishing cooperative programs with public and private land managers to maintain and improve elk security throughout the unit.

MANAGEMENT GOAL

Manage the elk populations in a healthy condition, allowing a 20-30% increase in elk numbers in HD 250 and the north and west portions of HD 270, maintaining current elk numbers in the remainder of the EMU, and cooperating in management of elk habitat with emphasis on maintaining a diverse bull age structure.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 1.4 million acres of occupied elk habitat.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 30% of the bull harvest occurring during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will continue to:

- Cooperate with the Bitterroot, Beaverhead and Deerlodge national forests in the planning and design of timber sale cutting units and road management systems to maintain elk security areas and secure travel corridors, particularly in remaining roadless areas, and on and adjacent to winter ranges where bulls become vulnerable to hunting pressure with the onset of snow accumulation. Maintenance of adequate unlogged natural security will be emphasized by DFWP.
- Recommend new road closures and September 1 seasonal closures for roads that penetrate important bull security areas. Locations where major road closures are recommended include the Took Creek Saddle, Meadow-Tolan Ridge, and the Bertie Lord and Rye Creek road systems, including closure of all "loop" roads. Loop roads bisecting elk migration routes that should be considered for closure include the 311, Bertie Lord, Meadow-Tolan Ridge and North Fork of Rye Creek roads.
- Cooperate with DSL in managing the French Basin walk-in area to enhance elk security on winter range.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 3,300-3,800 elk.
- 2) Provide an annual harvest of 400 antlered and 475 antlerless elk.
- 3) Maintain a minimum late-winter calf:cow ratio of 35-45 per 100.
- 4) Maintain a harvest comprised of at least 15% bulls 4.5 years or older and at least 10% 6-point bulls (to be monitored at the Darby check station).
- 5) Maintain an annual bull harvest comprised of at least 45% BTBs in HDs 211, 214 and 321, and 100% BTBs in HDs 250 and 270.
- 6) Provide 47,500 hunting recreation days annually for 6,000 hunters.

POPULATION MANAGEMENT STRATEGIES

- Continue coordination with private and public land managers to maintain and improve elk security, particularly in areas on and adjacent to winter ranges where bulls become vulnerable with the onset of snow accumulation.
- Numbers of antlerless permits will be adjusted according to changes in population trends in order to maintain a stable late-winter population, with the exception of HD 250 and the portion of HD 270 north of Rye Creek, where populations will be managed to allow a population increase of 20-30%.

Regulations: Current hunting season regulations include a five-week any-bull season with antlerless harvest regulated by antlerless permits, except for the Bitterroot portion of the unit which features a BTB regulation and A-7 licenses for the duration of the general season. The use of A-7 licenses will be evaluated with respect to meeting antlerless harvest objectives.

GAME DAMAGE STRATEGY

In the past, elk damage problems have occurred southwest of Anaconda, in the Sula Basin and west of Jackson. If problems recur, harvest pressure will be directed to these subpopulations to reduce their numbers.

ACCESS STRATEGY (to maintain current levels of public access to public and private lands while reducing road densities in problem areas):

DFWP will assist landowners with hunter management utilizing walk-in hunting areas and block management agreements where appropriate.

BIG BELT EMU

(Hunting Districts 892 and 446)

Description: This 985-square-mile EMU is situated near Helena, Townsend and White Sulphur Springs and encompasses the Big Belt Mountains, including a portion of the Gates of the Mountain Wilderness. In the western portion of the unit, approximately 75% of the elk habitat is on public lands (USFS and BLM). About 39% of the elk habitat in the eastern portion (HD 446) is in public ownership.

Public Access: Road and trail access is good in most of the area. However, some areas are closed to the general public as a result of leased or outfitted hunting. Access restrictions, some of which also block public access to public lands, are most prevalent in the eastern portion of the unit.

Elk Populations: Elk numbers have increased over the past 10 years to an estimated 1,600-1,800. Elk security in the southern portion of the unit is provided by large blocks of unroaded habitat. In other portions of the unit, timber harvest and road construction on public and private lands have reduced the quantity and quality of elk security.

Recreation Provided: Between 13,000 and 15,000 days of hunting recreation are expended annually by 2,600 to 3,000 hunters. Wildlife viewing and photography are important uses of the elk resource in areas that offer backcountry settings, including the Birch Basin, Camas Creek and Boulder-Baldy areas.

Current Annual Elk Harvest: 550-650 (250-300 antlered and 300-350 antlerless).

SUMMARY OF PUBLIC COMMENT

The public expressed a desire to increase bull survival through the hunting season. Comment also indicated support for improving elk security through establishment of additional road closures. Timber interests commented that the elk plan is uncompromising with regard to logging and that it should place more emphasis on long-term vegetation management, including use of timber harvest to replace the historic role of fire in timbered habitats. A desire for opening more land to hunter access was voiced. The public expressed support for improved compensation to landowners for game damage, acquisition of elk winter range by the state, opposition to game damage assistance (provided by DFWP) to landowners who don't allow public hunting and a need for improved cattle grazing practices on public lands, designed to encourage elk to remain on public lands during hunting season rather than on private lands.

MANAGEMENT GOAL

Manage the elk population in a healthy condition with emphasis on maintaining a diverse bull age structure and cooperating in the management of elk habitats to provide a diversity of elk hunting experiences. The elk population in HD 446 will be reduced.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 246,600 acres of occupied elk habitat.
- 2) Maintain elk security at levels that will assure the elk harvest is distributed throughout the hunting season, with no more than 40% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will work with state and federal land management agencies to pursue the following habitat strategies:

- Establishment of improved grazing systems where problems currently exist.
- Establishment of trees in clearcut areas where cover has not regenerated.
- Reclamation of unnecessary roads.
- Monitoring of soil and vegetation condition on publicly owned winter ranges and implementation of programs designed to maximize the attractiveness of these areas to elk.
- Inventory of current open-road densities and assessment of elk security levels to develop a comprehensive road management plan that will improve elk security and enhance hunting opportunity on public lands.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 1,600-1,800 elk, with a 50% population reduction in HD 446.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100.
- 3) Provide an annual harvest of 250-300 antlered and 300-350 antlerless elk.
- 4) Maintain an annual bull harvest comprised of 100% BTBs in HD 892 (including at least 5% 6-point bulls) and 50% BABs in HD 446.
- 5) Provide 15,000 days of hunting recreation annually for a total of 2,600-3,000 hunters.

POPULATION MANAGEMENT STRATEGY

Elk numbers will be reduced or stabilized in areas of chronic game damage where winter range is in private ownership. Elk numbers will be increased in suitable habitats including publicly-owned winter ranges. The elk population in HD 446 will be reduced by at least 50%.

Regulations: Current regulations include a five-week any-bull hunting season in the east portion (HD 446) and a BTB season in the west portion (HD 892), with antlerless harvest regulated by antlerless permits, a scheduled late hunt and an extended antlerless season on some private lands.

GAME DAMAGE STRATEGY

Game damage problems in HD 446 are the result of excessive elk numbers, prompted in large part to lack of public hunting access to private lands. Where feasible, efforts will be made to attract elk currently using private lands to public lands.

ACCESS STRATEGIES

- Reduce hunting access to the Cabin Gulch and Benton Gulch areas (public lands) and increase hunting access to private lands.
- Pursue opportunities to work with landowners who currently lease their hunting rights, with the objective of obtaining public access to their lands and/or adjacent public lands, utilizing the block management program.

HD 446 PORTION OF THE BIG BELTS EMU

Description: This portion of the unit is located on the east side of the Big Belt Mountains and encompasses approximately 450 square miles. About 268 square miles of the land area is seasonal or yearlong elk habitat. Approximately 39% of the elk habitat in HD 446 is administered by the Helena National Forest. The majority of elk winter range is located on privately owned land. More than 90% of the private lands are closed to hunting by the general public. The current elk population is estimated to be 1,200. Elk numbers have declined on public lands during recent years, but continue to increase on large private land holdings.

Leasing of hunting rights, fee hunting and/or outfitting is prevalent. The area's elk population has increased as a result of the decision made by a majority of the landowners to restrict public hunting in order to capitalize on the demand for elk by non-resident hunters.

Considerable amounts of timber have been removed from private and public lands in HD 446 during the past 10 years. Timber removal and associated road-building have resulted in substantial reductions in elk security. Reduced elk security on public lands, coupled with light hunting pressure on private lands, have prompted the majority of elk to leave public lands early in the fall. This change in seasonal elk distribution makes elk unavailable to the general public during the general hunting season. Private landowners have requested extended and/or late damage hunts to accomplish herd reductions, with emphasis on reducing the antlerless population. This approach has been relatively unsuccessful to date.

Management Goal: Cooperate with public and private land managers to provide optimum elk habitat, manage for a diversity of elk hunting experiences and reduce elk population levels by at least 50%.

Objectives:

- 1) Reduce the elk population by a minimum of 50%.
- 2) Redistribute elk so they occupy public lands rather than private lands during spring, summer and fall.
- 3) Manage elk security so that no more than 40% of the annual bull harvest is taken during the first week of the general season.
- 4) Provide an annual harvest of 150-200 elk and 2,500-3,500 days of hunting recreation annually for 800-1,000 hunters after the herd has been reduced (dependent upon successful reduction of the elk population and/or elk redistribution, which would make elk accessible to hunters during the general hunting season).
- 5) Maintain an annual bull harvest comprised of at least 50% BTBs.
- 6) Eliminate reliance on extended seasons or late damage hunts to accomplish herd reductions.

Strategies:

DFWP will cooperate with land management agencies and private landowners to pursue the following strategies:

- Maintain timber cover in key areas that provide critical elk security and defer timber harvest from historically important elk security areas that can no longer offer elk security due to intensive timber harvest and associated high road densities.
- Support permanent closure of all new roads built for timber harvest access.
- Design and implement permanent or seasonal closure of existing roads in locations where closures are needed to enhance elk security levels and improve hunting opportunity.
- Design and implement livestock grazing allotment plans that will benefit vegetation, watershed values, wildlife and livestock.
- Enhance elk security values on public lands in an effort to redistribute elk from private lands onto public lands.
- Increase hunting pressure on private lands to encourage redistribution of elk from private lands to public lands.
- Develop hunting season strategies designed to encourage elk to use public lands to a greater degree than they do at the present time.

BRIDGER EMU

(Hunting Districts 312, 890, 891 and 393)

Description: This 1,747-square-mile southcentral Montana EMU encompasses the Bridger Mountains and the south end of the Big Belt Mountains and is bounded by the towns of Townsend, Ringling, Livingston and Three Forks. Approximately 70% of the occupied elk habitat is on privately-owned lands with a limited amount of spring, summer and fall elk range located on USFS lands. Most of the private land is rangeland, with some dryland farming in the western portion of the unit.

Public Access: Access to much of the EMU is limited. Due to the fact that most elk habitat is in private ownership and that outfitters have leased the hunting rights to most private lands, hunting opportunity for the general public is limited.

Elk Populations: There are currently 2,300 to 2,600 elk in this unit. Historically, postseason hunts have been held periodically to reduce the antlerless segment of elk populations wintering on private lands. The elk population has fluctuated, building up until elk numbers exceed landowner tolerance, then declining as a result of late-season herd reduction hunts. Hunting access restrictions have made it difficult for DFWP to manage elk numbers on private lands through the use of annual hunter harvest.

Recreation Provided: This unit provides 16,500 to 17,000 days of hunting recreation annually for 3,400 to 3,700 hunters. Expanded elk numbers on USFS lands in the Bridger Mountains have enhanced opportunities for viewing and photographing elk during the summer months.

Current Annual Elk Harvest: 580-890 (280-400 antlered and 300-490 antlerless)

SUMMARY OF PUBLIC COMMENT

Public comment indicated strong support for maintaining the current recreational character of the unit. Many people also voiced support for improved opportunities to harvest older bulls. The public expressed a desire to increase the number of 6-point bulls in the population and the total bull harvest. The public also expressed support for improving elk security. Some people thought that hunter access should be improved while others believed that current access levels are adequate.

MANAGEMENT GOAL

Manage the elk population in a healthy condition; cooperate with the USFS in management of elk habitat to make public lands more attractive to elk, and manage elk numbers at a level consistent with landowner tolerance for elk on private lands.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 469,000 acres of occupied elk habitat.
- 2) Maintain elk security levels that will assure the elk harvest is distributed throughout the hunting season, with no more than 40% of the annual bull harvest taken during the first week of the general season. Adequate security levels should ensure that major displacement of elk from public to private lands during the hunting season does not occur.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with land management agencies to pursue the following strategies:

- Maintain timber cover in key areas that currently provide critical elk security and defer timber harvest from historically important elk security areas that can no longer offer security as a result of intensive timber harvest and associated high road densities.
- Promote permanent closure of all new roads built for timber harvest access.
- Design and implement permanent or seasonal closure of existing roads in locations where closures are needed to enhance elk security and improve hunting opportunity.
- Design and implement livestock grazing allotment plans that will benefit vegetation, watershed values, wildlife and livestock.
- Enhance elk security values on public lands in an effort to maintain elk on public lands during the hunting season.
- Ensure that all harvested timber units are fully regenerated so they will provide elk security as they mature.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 2,300-2,600 elk.
- 2) Maintain a minimum observed late-winter bull:cow ratio of 5-10 per 100.
- 3) Provide an annual harvest of 300-400 antlered and 300-400 antlerless elk.
- 4) Maintain an annual bull harvest comprised of 100% BTBs to include 5% 6-point bulls.
- 5) Provide a minimum of 16,115 hunting recreation days annually for a total of 3,500 hunters.

POPULATION MANAGEMENT STRATEGY

Regulations: A five-week BTB season in HD 891 and the western half of HD 890, a five-week BTB season on public lands in HDs 312 and 892, a four-week BTB season on private lands in HDs 312, 393 and the eastern half of HD 890, and a one-week antlerless season on private lands in HDs 312, 393 and the eastern half of HD 890. The antlerless harvest will be regulated through use of antlerless permits on public lands, a one-week antlerless hunting period on some private lands, and a late permit-only elk hunt in a portion of the unit.

GAME DAMAGE STRATEGY

DFWP personnel will work with private landowners to determine tolerable levels of elk on private lands and continue to work closely with the USFS and BLM to improve range conditions and reduce open-road densities where needed to encourage elk use of public lands rather than private lands.

ACCESS STRATEGY

Because most elk are distributed on private lands during the hunting season, DFWP will pursue block management agreements and other means of assisting landowners with the goal of encouraging them to provide public hunting opportunities on their lands. Coordination among adjacent landowners to provide public hunting access is imperative to achieve elk harvests adequate to attain population objectives. Support and encouragement will be given to federal and state agencies to secure additional access to public lands.

EMIGRANT EMU

(Hunting Districts 313, 316 and 317)

Description: This 990-square-mile EMU encompasses the east side of the Upper Yellowstone drainage, from Livingston south to Yellowstone National Park (YNP) and east to Cooke City. Approximately 70% of the unit lies within the Absaroka-Beartooth Wilderness. Of the remaining 30%, about half is in private ownership and half is publicly owned (USFS, BLM, DSL, DFWP). The terrain is moderately to extremely rugged with extensive areas of timber cover and high elevation subalpine/alpine habitats. The floor and foothills of the upper Yellowstone valley are dominated by ranches and dispersed housing developments.

Public Access: Most of the unit is easily accessible with the exception of the north Absaroka face between Pine Creek and Six Mile Creek and between Mol Heron Creek and YNP, where access to the Gallatin National Forest is restricted by private landowners. Recent addition of the Nelson property to the Dome Mountain WMA improved access to USFS lands south of Six Mile Creek.

Elk Populations: This unit is used by a portion of the Northern Yellowstone Elk Herd, the largest migratory elk herd in North America, numbering more than 20,000 animals in some years and currently more than 15,000 elk. The elk population associated with this unit also includes a migratory herd of 3,000-4,000 that summers in YNP and moves to the southern end of the unit during fall and winter, as well as 800-1,000 resident elk that summer in the Absarokas and winter on the western edge of the unit. Elk numbers, both resident and migratory, have been increasing gradually in recent years. Elk security is excellent over most of the area. However, timber sales proposed for the Mill Creek drainage will reduce elk security values in a 25,000-acre area.

Recreation Provided: Based on a three-year average (1987-1989), this unit provides 16,000 days of hunting recreation annually for a total of 4,400 hunters. Exceptional wildlife viewing opportunities are available at the southern end of the unit during winter. Large numbers of elk, deer and antelope are visible between Yankee Jim Canyon and Gardiner. Hundreds of miles of backcountry trails provide good wildlife viewing opportunities throughout the summer and fall.

Current Annual Elk Harvest: 400-500 (300-350 antlered and 100-150 antlerless) during the regular season and 900 (50 antlered, 850 antlerless) during the late season.

SUMMARY OF PUBLIC COMMENT

Public comment was supportive of maintaining the high elk security levels and low open-road densities that currently exist in the unit. The public also voiced support for protection of elk winter ranges on private lands through land trades or cooperative programs with landowners or acquisition of fee title. Many people expressed opposition to restrictive hunting regulations designed to maximize production of trophy bulls. Some voiced opposition to acquisition of additional hunting access on the basis that elk security would be reduced and landowner rights

would be violated. Some expressed fear that public access would be secured through condemnation procedures.

MANAGEMENT GOAL

Provide unique elk hunting experiences to include the opportunity to harvest trophy bulls during early and late seasons; provide unique elk viewing opportunities; foster migratory behavior of YNP elk and increase the carrying capacity of elk winter ranges in the upper Yellowstone Valley.

HABITAT OBJECTIVE

Protect elk security in order to maintain high postseason bull:cow ratios (15+) and relatively low bull harvest rates (20-30%) during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will cooperate with public and private land managers to pursue the following habitat strategies:

- Evaluate proposed logging, grazing, mining and recreational developments in regard to their potential impacts on elk populations.
- Encourage the USFS to consider the effects of previous timber sales and fires on elk habitat when evaluating proposed resource management actions.
- Protect and enhance major elk winter ranges located on public and private lands in the Upper Yellowstone Valley, including the Dome Mountain WMA and the OTO Ranch (recently acquired by the Gallatin National Forest).
- Maintain open-road densities at acceptable levels.

POPULATION MANAGEMENT OBJECTIVES

- 1) Manage for an average late-winter population of 5,000 - 6,000 elk, (an increase of 20-25% over recent years). The number of migrants will vary, dependent on winter conditions and the impact of recent winter range acquisitions.
- 2) Maintain an observed late-winter bull:cow ratio of 15 per 100.
- 3) Provide an annual harvest of 500-600 antlered elk (current levels) during the early and general seasons and a late-season harvest of 50-150 antlered elk (an increase).
- 4) Provide an annual general season harvest of 200-250 antlerless elk (moderate increase) and a late-season harvest of 1,200-1,800 antlerless elk (30-50% increase).
- 5) Maintain an annual bull harvest comprised of 35-45% BTBs and 25-35% 6-point bulls (current levels).

- 6) Provide for 16,000 hunting recreation days for a total of 3,500 hunters during the early and general season (10% increase from 1988) and 2,400-2,800 late-season permit holders (10-15% increase from the mid-1980s).

POPULATION MANAGEMENT STRATEGY

Elk numbers will be reduced in areas with chronic game damage and elk populations in suitable habitats will be allowed to increase. The late hunt will be designed to regulate numbers of elk using winter ranges in the upper Yellowstone valley while accommodating and encouraging migration of YNP elk to winter ranges outside the Park. DFWP will continue to cooperate with YNP and the USFS in monitoring efforts and research projects associated with the Northern Yellowstone Elk Herd.

Regulations: Hunting season includes an early archery season, an early backcountry rifle season and a late-winter elk hunt during January and February. Current regulations include a six-week archery season in HDs 313 and 317, a five-week early either-sex hunt in the Wilderness portion of HD 316, a 5-week any-bull season in all HDs and a late permit-only elk hunt in HD 313.

GAME DAMAGE STRATEGIES

Antlerless elk permits will be used to reduce elk herds responsible for game damage problems on private lands near Gardiner, south of Six Mile Creek and near the mouth of Mill Creek. Hunters will be directed to areas where game damage is occurring.

ACCESS STRATEGIES (to improve hunting access to public and private lands):

DFWP will encourage the Gallatin National Forest to improve trail access to public lands in the Mol Heron Creek drainage and to the area between Pine Creek and Six Mile Creek through acquisition or easement. DFWP personnel will also encourage a more active trail maintenance and construction program by identifying specific projects on USFS lands.

GALLATIN EMU

(Hunting Districts 301, 310 [N. portion], and 314)

Description: This 936-square-mile EMU straddles the Gallatin/Yellowstone Divide and is bounded by Yellowstone National Park to the south and Bozeman and Livingston to the north. Much of the unit is characterized by checkerboard ownership and extensive logging activity. Remaining roadless tracts have been proposed for wilderness designation. The Gallatin National Forest, which administers about 90% of the land base, has been working toward trading tracts of USFS land for key parcels of privately-owned lands. Most of the DFWP-owned Porcupine WMA is situated within this EMU.

Public Access: Good public access exists on the Gallatin side of the unit but about 40% of the Yellowstone side lacks adequate public access to public lands.

Elk Populations: The elk population that winters in the Gallatin Canyon (currently 1,200 to 1,400) has been managed at a level that minimizes losses during severe winters. This population is comprised primarily of elk from the Park and has been managed with a scheduled late hunt. Elk populations in the remainder of the unit have been increasing since the late 1970s and currently number between 3,600 and 3,800. Most of the elk that winter on the east and north faces of the Gallatin Range utilize privately-owned lands. The lack of secured winter range along the slopes of the Gallatin Range limits the potential of the area to support elk due to development of subdivisions and landowner tolerance for wintering elk. Privately owned parcels of critical elk winter range in the Gallatin Canyon face increasing threat of subdivision.

Recreation Provided: This unit provides 20,700 days of hunting recreation annually for about 3,900 hunters offering about 3 1/2 months of hunting opportunity, beginning with the archery season in early September and ending with the late-season Gallatin hunt, which extends through January. Wildlife viewing, photography, educational tours and antler gathering are major recreational pursuits in the Gallatin Canyon during all seasons of the year.

Current Annual Elk Harvest: 1,025, (475 antlered and 550 antlerless). Depending on weather conditions, 250 to 400 antlerless elk may be harvested during late-season hunts.

SUMMARY OF PUBLIC COMMENT

Public comment indicated strong preference for maintaining the current recreational character of the unit. Public sentiment was divided among those who thought the elk harvest should be increased, decreased or maintained at current levels. Strong support was voiced for securing key elk winter ranges via fee title acquisition, conservation easements, leases, trades or soliciting conservation buyers. People expressed concern that greater ease of access to elk security areas would adversely impact elk populations and result in shorter hunting seasons. Some expressed concern that objectives for bull:cow ratios were too low.

MANAGEMENT GOAL

Manage elk populations in a healthy condition at current levels; cooperate in management of elk habitats, and provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 550,000 acres of occupied elk habitat.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 30% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Continue to support and promote the Porcupine land exchange between the USFS and Plum Creek Timber Company, which is key to maintaining critical winter range for the Gallatin elk herd.
- Encourage the USFS to implement hunting season road and area closures in the Hyalite drainage while maintaining vehicle access via primary arterial roads.
- Encourage protection of key elk winter range from subdivision, particularly in the Gallatin Canyon and along the east and north faces of the Gallatin Range by working with county and local planners and soliciting conservation easements, leases, fee title acquisition and conservation buyers.
- Identify areas where road closures are necessary to enhance elk security, and work with land managers to reduce open-road densities where necessary.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 3,600-3,800 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 8 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 40 per 100.
- 4) Provide an annual harvest of 450-550 antlered and 500-600 antlerless elk.
- 5) Maintain an annual bull harvest comprised of 35-37% BTBs and 12-25% 6-point bulls.
- 6) Provide a minimum of 20,700 days of hunting recreation annually for approximately 3,900 hunters during the general season.

POPULATION MANAGEMENT STRATEGY

Regulations: Current regulations include five weeks of any-bull or BTB hunting (depending on the hunting district) with the antlerless harvest regulated by antlerless permits.

GAME DAMAGE STRATEGY

Numbers of elk wintering on private lands along the east and north slopes of the Gallatin Range will be managed according to landowner tolerance.

ACCESS STRATEGIES (to substantially increase public hunting access):

DFWP will:

- Cooperate with the USFS and private landowners along the east and north faces of the Gallatin Range to improve public hunting access to public lands, especially in the Trail, West Pine, Dry, Eightmile and Fridley Creek drainages.
- Cooperate with the USFS to establish seasonal road closures in the Hyalite drainage and in other areas with high-density roading. Such closures would focus on peripheral portions of the drainage, keeping road access to central portions of the drainage intact.

HIGHLAND EMU

(Hunting Districts 340, 850 and 870)

Description: Located in the Butte-Boulder-Dillon vicinity, this 1,100-square-mile EMU encompasses the Highland and Bull mountains. About a third of the land base is in private ownership and two-thirds are in public ownership. The Deerlodge National Forest and BLM are the principal public land managers. Most of the private lands are in agricultural production.

Public Access: Most of the unit is easily accessible. However, public access to portions of the east side (the Fish Creek - Big Ridge area) is restricted. DFWP has worked closely with federal agencies and landowners to maintain adequate public access over large portions of the unit through cooperative road management programs.

Elk Populations: The elk population, which currently numbers 1,600, has increased steadily over the past 10 years. Increases in elk numbers have occurred primarily as a result of restrictive hunting seasons and improved habitat productivity on public lands. Large portions of the unit are characterized by very low elk security levels, resulting in low numbers of antlered bulls surviving the hunting season. Elk winter on private lands in portions of the unit. Antlerless elk harvest has been directed to those areas in recent years.

Recreation Provided: The unit provides 17,000 days of hunting recreation annually for about 3,300 hunters. Approximately 80% of the land base provides hunting recreation characterized as "moderate to high levels of motorized access" and 20% provides backcountry recreational experiences. Wildlife viewing occurs throughout the unit during all seasons of the year.

Current Annual Elk Harvest: 380 (180 antlered and 200 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated support for maintaining the current management goal and objectives. Support was registered for increasing elk populations, as well as reducing them. A desire for increased access to public lands along the east slope of the Highland Mountains (HD 340) was expressed.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at current levels and cooperate in the management of elk habitat with emphasis on maintaining a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 500,000 acres of occupied elk habitat.

- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 30% of the bull harvest taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

- DFWP will work with USFS personnel to improve elk security throughout the unit, with special attention to HD 340 where timber harvest has substantially reduced elk security.
- The interagency access and travel planning process will be used to identify areas where additional road management is needed.
- DFWP will cooperate in the process of revising grazing allotment management plans by providing technical assistance. Participation in revision of the Hells Canyon AMP is a high priority.

POPULATION OBJECTIVES

- 1) Maintain the current late-winter population of 1,500-1,700 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 8 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 40:100.
- 4) Provide an annual harvest of 150-200 antlered and 200-250 antlerless elk.
- 5) Maintain an annual bull harvest comprised of 100% BTBs, of which at least 5% are 6-point bulls.
- 6) Provide 17,000 hunter recreation days annually for a total of 3,000-3,500 hunters.

POPULATION MANAGEMENT STRATEGY

Regulations: Current regulations include a five-week BTB hunting season with antlerless harvest regulated by antlerless permits.

GAME DAMAGE STRATEGY

Coordinate with landowners in the Bull Mountains and the east slope of the Highlands to maintain a level of public hunting necessary to manage the elk population, employing block management agreements where appropriate. Priority will be given to solving access and landowner-sportsperson relations problems in the Cherry Creek-Fish Creek portion of HD 340.

ACCESS STRATEGIES (to maintain hunting access at current levels):

DFWP will

- Identify areas where additional public access is needed to attain an adequate elk harvest.
- Continue as a cooperator in maintenance of the Southwest Montana Interagency Access and Travel Plan. This effort maintains a current map showing main access points to and travel routes on public lands.
- Cooperate with the Deerlodge National Forest in development of an access plan to identify and prioritize access needs for USFS lands.
- Work with private landowners to maintain as much public hunting opportunity as possible on private lands.
- Address landowner issues by continuing to work with the Headwaters Resource Conservation and Development (RCD) Big Game Committee.

GRAVELLY EMU

(Hunting Districts 322, 323, 324, 325, 326, 327 and 330)

Description: This 1,800-square-mile EMU encompasses the Gravelly, Greenhorn, Snowcrest, Centennial and Blacktail mountain ranges of southwest Montana. With the exception of the Snowcrest and Centennial mountains, which are steep and rugged, the unit consists primarily of gentle, rolling terrain, even at high elevations. About 50% of the land base is administered by the Beaverhead National Forest. Three DFWP-administered wildlife management areas are located in this EMU (Blacktail, Wall Creek and Robb-Ledford WMAs).

Public Access: The entire unit is easily accessed by road. Elk security is limited. The few areas without road access provide elk security. Public hunting access is good in most of the unit except for portions of the west side of the Snowcrest and Greenhorn ranges, east side of the Gravelly Mountains and the Blacktail Mountains.

Elk Populations: The elk population in this unit is between 7,000 and 7,500. Elk security is moderate to low, due to high road densities and limited cover. Elk populations have increased following DFWP acquisition of elk winter ranges in the 1960s and 1970s. The recent acquisition of the Robb/Ledford WMA should foster a continued population increase.

Recreation Provided: The unit provides 34,700 days of hunting recreation to about 6,300 hunters annually. Wintering elk can often be seen on the Wall Creek WMA, from U.S. Highway 287 just south of Indian Creek.

Current Annual Elk Harvest: 1,400-1,800 (600-800 antlered and 800-1,000 antlerless). The bull harvest has been composed of about 35% yearlings and 65% mature bulls.

SUMMARY OF PUBLIC COMMENT

Public comment indicated general support for maintaining or increasing the elk population and reducing hunter numbers. Some expressed preference for maintaining elk populations at current levels. There was also some interest expressed for increasing the bull harvest as well as the proportion of older bulls in the harvest. There is strong support for improving elk security. However, there are limited opportunities to improve elk security because of limited timber cover and public desire to maintain current levels of road access. Timber interests commented that the elk plan is uncompromising with regard to logging and that it should place more emphasis on long-term vegetation management, including use of timber harvest to replace the historic role of fire in timbered habitats. Concern about illegal bull mortality was expressed.

MANAGEMENT GOAL

Manage for an increasing elk population with a maximum sustained harvest of 2 1/2-year-old or older bulls; maintain hunter opportunity for bull hunting; minimize illegal mortality; and cooperate in the management of elk habitat to maintain a healthy elk population.

HABITAT OBJECTIVES

- 1) Work with land management agencies and private landowners to maintain or improve range condition on elk summer ranges, key calving areas and sagebrush winter ranges.
- 2) Work with land management agencies to complete identification and mapping of key elk winter ranges (to be completed in 1992).
- 3) Work with land management agencies to maintain fall elk security so that elk harvest is distributed throughout the hunting season with no more than 40-45% of harvested bulls taken during the first week of the general season.
- 4) Manage DFWP WMAs to maintain or improve vegetation condition.

HABITAT MANAGEMENT STRATEGIES

Areas of emphasis for application of habitat strategies:

Areas where timber harvest has been proposed by DSL, including: Corral Creek, Patchtop Mountain, Blacktail Deer Creek, Lone Tree Pass, Teepee Creek, Clover Creek/Wolverine Creek; Cottonwood Creek, Long Creek and Poison Gulch in the Blacktail Mountains; Hoffman Gulch (Sweetwater Hills), and Arrowhead Mountain.

Areas where the BLM is proposing timber sales: Alder Gulch; Davey Creek, Barton Gulch and Idaho Creek in the Greenhorn Mountains; the southern Greenhorn Mountains; the southeast portion of the Blacktail Mountains; Spring Creek and Stone Creek/Cottonwood Creek in the Ruby Mountains, and the Rocky Man area of the Blacktail Mountains.

Areas where the USFS is proposing timber sales: Hoodoo Pass and West Fork of the Madison River in the Gravelly Mountains; the Greenhorn Mountains, and Ruby Creek and the Middle Fork of Warm Springs Creek in the Gravelly Mountains.

Although this list includes areas of priority concern to DFWP, it is not all-inclusive. Habitat strategies listed below will also apply to other areas as they are identified.

In addition to the habitat strategies outlined in the statewide plan, DFWP will work with public and private land managers to accomplish the following:

- Discourage second-entry logging in areas where past logging has had a detrimental effect on bull survival, including but not limited to the West Fork Madison River and Standard Creek vicinities, Idaho Creek and Barton Gulch vicinities, Sweetwater Hills, Blacktail Mountains and Alder Gulch. Consideration of second entry to such areas should be preceded by evaluation of current elk security provisions. In less critical areas, second entry should be preceded by reestablishment of cover to a height of at least 10-15 feet.

- Discourage timber harvest and associated road building adjacent to key elk winter ranges where such development has the greatest potential to negatively impact survival of bull elk. If new road construction in such areas is considered, DFWP will recommend that they be designed so they do not bisect important elk travel routes (e.g. between security areas and feeding areas) and accommodate closure by obstruction.
- Identify key blocks of elk security for which the Management Area (MA) designation in the Beaverhead Forest Plan conflicts with elk security needs, and propose redesignation of some areas, including:
 - The Beaverhead Forest Plan features three timber management area designations for Gravelly Planning Unit 6A: French Gulch (MA 16), Pole Patch (MA 20) and Clover Meadows (MA 20). These timbered areas provide some of the only elk security on the west slope of the Gravelly Mountains and are especially important to elk during hunting season.
 - The Gravelly Planning Unit 6G and 6I outline four timber management area designations in the Dry Fork of Ruby Creek (MA 16), Ruby Creek (MA 16), Horse Creek (MA 20) and Granite Mountain (MA 20) vicinities. The northern portion of the Granite Mountain MA and all other MAs are close to winter range and therefore provide very important security as elk move to winter ranges during hunting season.
- Work with land management agencies to accomplish an inventory of areas where past logging activities have been documented to have detrimental impacts on bull survival.
- Cooperate with the USFS and BLM in implementation of small scale telemetry studies in areas where data on specific elk movements, habitat use and location of key security areas are lacking. A priority site for this kind of effort is the Greenhorn Mountains.
- Cooperate in the review and evaluation of existing livestock allotment management plans (AMPs), to include AMPs scheduled for revision by the respective land management agencies. DFWP will pursue application of the following habitat management strategies in revision of all AMPs, with emphasis on the allotments listed below. Although the following list is not all-inclusive, it does include priority areas of concern to DFWP, based on land management agency plans scheduled to be implemented within the next five years:
 - Upper Ruby (USFS) and the Garden Creek, Clark Canyon, Sage Creek, Robb Creek, Knox, Shambo/Peet and Price Creek allotments (BLM), all designated as priority allotments for revision by their respective managing agencies.
 - Pole Creek, Warm Springs, Snowcrest, Wall Creek, West Fork Madison, North Saddle, Cherry/Morgan and Antelope Basin (USFS), and Garden Creek, Clark Canyon, Sage Creek, Robb Creek, Knox, Shambo/Peet and Price Creek (BLM), all of which are very important to elk. DFWP will also continue to work with the BLM in revising the Price Creek AMP.
- Maintain and/or develop managed grazing systems on livestock allotments that encompass important elk habitats. These systems should incorporate an adequate amount of

- scheduled rest with pasture rotation based on plant phenology (annual development and reproduction) rather than continual or annual deferred use.
- Develop or maintain livestock forage utilization standards and elk forage allocation standards for allotments encompassing elk winter range.
- Provide evaluations and recommendations on proposed burn projects for sagebrush, aspen and Douglas fir communities on public or private lands. Where applicable, DFWP will emphasize the value of such communities for elk calving, summer or winter range.
- Promote maintenance of sagebrush communities on public lands to maintain vegetation diversity, soil cover, elk forage quality and quantity, important elk winter range and important cover in elk calving areas.
- Ensure that existing and new AMPs do not compromise elk winter range designations and forage availability on winter ranges as a result of secondary land treatments designed to reduce livestock use of riparian habitats.
- DFWP will explore the possibility of providing incentives to private landowners who agree not to destroy key sagebrush areas, while agreeing to allow a reasonable level of public elk hunting.
- Through use of conservation easements, leases, land trades and/or fee title acquisition, encourage owners of elk winter range to maintain those lands in an agricultural base rather than developing or subdividing their property.
- Implement livestock grazing systems that provide adequate rest so that aspen stands can be reestablished following prescribed burns or cutting. Prescribed burns or cutting in the absence of adequate rest from livestock use may result in accelerated loss of aspen stands.
- Retain Douglas fir (or other conifer) establishment on public rangelands. The cover/forage ratio in much of this unit is considerably below the 40/60 guideline, pointing to a need to maintain existing cover or, where possible, to allow conifer cover to increase.
- Encourage public land managers to provide at least one full year of rest from livestock grazing following use of prescribed fire to facilitate recovery of the plant community.
- In situations where prescribed burning is deemed necessary, encourage implementation of prescribed burns during the spring season rather than the fall to avoid exceeding the desired prescription and loss of soil cover that commonly results from fall burning.
- Evaluate the appropriateness of livestock grazing at high elevations, including cirque basins.
- Utilize rest-rotation livestock grazing, where appropriate, to improve winter elk forage quality and quantity on WMAs. Cooperative rest-rotation grazing systems may include private lands adjacent to WMAs.
 - The rest-rotation grazing system on the Wall Creek WMA will be continued.
 - A rest-rotation livestock grazing system will be established on the Blacktail WMA in the bottom of the East Fork of Blacktail Deer Creek.
 - DFWP will pursue exchange grazing opportunities, including a potential exchange grazing agreement involving the Robb/Ledford WMA. Livestock grazing would be instituted on the WMA as a vegetation management tool. Grazing use would be provided in exchange for habitat considerations on adjacent privately owned

lands. If this agreement is reached, it will include public access to affected private lands.

POPULATION OBJECTIVES

- 1) Manage for a population increase of 500-1,000 elk on the Robb/Ledford WMA, thereby increasing the total EMU elk population to 8,000-8,500.
- 2) Maintain a late-winter calf:cow ratio of at least 45:100.
- 3) Provide an annual harvest of 700-900 antlered and 800-1100 antlerless elk.
- 4) Provide a minimum of 34,700 days of hunting recreation annually for a minimum of 6,300 hunters.

POPULATION MANAGEMENT STRATEGIES

Regulations: Elk will be managed within the framework of the current five-week general hunting season under a BTB regulation. The antlerless harvest will be managed with antlerless permits.

Recent management strategies designed to provide more 2 1/2-year-old or older bulls for harvest have reduced total bull harvest (compared to the previous any-bull regulation) and resulted in significant illegal bull mortality. Reductions in hunter opportunity may be too great a price for attempting to manage for older bulls in a unit characterized by limited elk security.

GAME DAMAGE STRATEGIES

DFWP will:

- Coordinate with private landowners in the Sweetwater Hills and on the east side of the Gravelly Mountains to maintain elk herds at levels within landowner tolerance.
- Maintain the rest-rotation livestock grazing system on the Wall Creek WMA to improve winter elk forage quality and quantity on all lands included in the system and improve landowner tolerance for wintering elk.
- Pursue exchange grazing opportunities involving the Blacktail and Robb/Ledford WMAs to enhance elk winter habitat and improve landowner tolerance for wintering elk.

ACCESS STRATEGIES (to improve public hunting access):

DFWP will:

- Identify and pursue opportunities for block management agreements or other landowner cooperative programs, primarily on the west side of the Snowcrest and Greenhorn ranges, the east side of the Gravelly Mountains and in the Blacktail Mountains. DFWP will also support and encourage efforts by federal and state land management agencies to secure access to public lands in these areas.
- Continue to pursue the potential to enter into an exchange grazing agreement on the Robb/Ledford WMA, which would also provide public access to lands adjacent to the WMA.
- Cooperate with the USFS and BLM in evaluating the use of ORVs in specific areas and off designated travel routes; assess the impacts of such activities on elk vulnerability and bull survival, and formulate necessary management actions.

FLEECER EMU

(Hunting Districts 319 and 341)

Description: This 600-square-mile EMU is southwest of Butte and encompasses the Fleecer Mountains and a portion of the Anaconda-Pintler Wilderness Area. Most of the unit is in public ownership, administered by the USFS. The DFWP-owned Fleecer and Mount Haggin Wildlife Management Areas are also located in this unit. Only about 20% of occupied elk habitat is in private ownership.

Public Access: Most of the unit is easily accessible to the public. Most privately-owned lands are open to public hunting through cooperative agreements between DFWP and landowners. Cooperative road management programs are in effect over most of the area.

Elk Populations: The elk population numbers about 1,500. Substantial population increases during the past 10 years are credited to restrictive hunting seasons and improved habitat productivity on public and private lands. Although most of the unit is in public ownership, some important winter range near Mount Fleecer is privately owned. Reductions in elk security levels due to extensive timber harvest have resulted in declining numbers of bulls surviving the hunting season.

Recreation Provided: About 19,000 days of hunting recreation are provided annually to 3,000 hunters. Approximately 70% of the land base provides recreation characterized as "moderate to high levels of motorized access"; about 20% provides minimum motorized access, and 10% lies within the Anaconda-Pintler Wilderness. Wildlife viewing occurs throughout the unit during all seasons. Large numbers of wintering elk on the Fleecer WMA are easily observed from Interstate 15 and State Highway 43, near Divide.

Current Annual Elk Harvest: 350 (150 antlered and 200 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated support for maintaining the current management goal and objectives.

MANAGEMENT GOAL

Manage the elk population in a healthy condition and cooperate in the management of elk habitat with emphasis on maintaining a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 352,000 acres of occupied elk habitat.

- 2) Maintain elk security so that elk harvest is distributed throughout the season, with no more than 30% of the bull harvest taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will work with the USFS and BLM to:

- Improve elk security throughout the transition range used by the Fleecer elk herd, especially in the Fishtrap, Mudd Creek, Seymour, Twelvemile and Bear Gulch drainages, where elk security has been substantially reduced as a result of logging.
- Identify areas where road closures are necessary to enhance elk security, via the Southwest Montana Interagency Access and Travel Plan.
- Participate in the process of revising grazing allotment management plans by providing technical assistance.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 1,500-1,800 elk (maintaining elk numbers in HD 319 at the current level (1,100) and increasing elk numbers in HD 341 from the current 450 to about 600).
- 2) Maintain an observed late-winter bull:cow ratio of at least 8 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 40 per 100.
- 4) Provide an annual harvest of 200-250 antlered and 250-300 antlerless elk.
- 5) Maintain an annual bull harvest comprised of 100% BTBs to include at least 5% 6-point bulls.
- 6) Provide 19,000 hunting recreation days annually for a total of 3,000-3,500 hunters.

POPULATION MANAGEMENT STRATEGY

Regulations: Current regulations include a five-week BTB hunting season with antlerless harvest regulated through use of antlerless permits.

GAME DAMAGE STRATEGIES

The following management strategies will help to alleviate game damage complaints by maintaining high quality elk habitat on private lands and enhancing landowner tolerance for elk:

- Maintain the current cooperative livestock grazing agreement with a landowner adjacent to the Fleecer WMA. This agreement is designed to eliminate game damage conflicts,

enhance landowner tolerance for wintering elk and improve the condition of privately-owned elk winter range.

- Maintain the current rest-rotation livestock grazing program on the Mount Haggin WMA, which is designed to provide high quality year-round elk habitat conditions.
- Work with the Mount Haggin Ranch to develop a grazing system designed to reduce the potential for game damage problems.

ACCESS STRATEGY (to maintain public hunting access at current levels):

Identify opportunities for block management or other landowner cooperative programs, maintain the Mill Creek block management area in HD 341, and support and encourage federal and state agencies to secure access to public lands where needed.

MADISON EMU

(Hunting Districts 310 [S. portion], 311, 360, 361 and 362)

Description: This 1,368-square-mile EMU lies between Bozeman, Ennis and West Yellowstone. It encompasses the Madison Range, Spanish Peaks Wilderness Area and Lionhead roadless area. The Bear Creek WMA and a small portion of the Porcupine WMA lie within this unit. Although most elk habitat is in public ownership, the majority of critical elk winter range along the Madison face is privately owned.

Public Access: Much of the land area is most appropriately accessed by foot or horseback. Generally, there is good road access to the periphery of the backcountry area. However, trail access to Wilderness along the Madison face is somewhat limited. Logging and recreation roads provide good access to the Gallatin Canyon portion of the unit, south of Big Sky. In cooperation with the Plum Creek Timber Company, the heavily roaded Jack Creek drainage is under a cooperative area closure.

Elk Populations: Winter elk population estimates range between 6,500 and 7,000. Elk have been increasing since the early 1970s, due primarily to conservative hunting seasons and a late hunting season that accommodates migration of elk from Yellowstone National Park to traditional winter ranges in the Bear Creek and Porcupine areas, north of the Park. Most of the privately owned winter range along the Madison face and the face of the Spanish Peaks is owned by individuals who acquired their ranches because of the area's outstanding wildlife values and therefore accommodate substantial numbers of wintering elk on their lands.

Recreation Provided: This unit provides 23,700 days of hunting recreation to about 4,600 hunters every year during the general season. The unit offers approximately 4 1/2 months of elk hunting opportunity, beginning with an archery season in early September and ending with the late-season Madison hunts that extend through January. During winter, considerable elk viewing recreation takes place along U.S. Highway 191 in the Gallatin Canyon and in the Madison Valley along U.S. Highway 287. Summer hiking and horseback trips into the backcountry also provide elk viewing opportunities.

Current Annual Elk Harvest: 1,140 during the general season (492 antlered and 648 antlerless) and a late-season harvest of 400-800 antlerless elk.

SUMMARY OF PUBLIC COMMENT

Strong support was voiced for maintaining stated population objectives except that most people expressed a desire to increase elk distribution rather than maintain the current acreage of occupied elk habitat. Public input was divided on whether the elk population should be maintained at current levels or increased. The public also expressed a desire to increase public access and access diversity, while maintaining low road densities. Strong support was voiced for securing additional key elk winter ranges. Opposition to use of A-7 licenses was heard.

MANAGEMENT GOAL

Manage elk populations in a healthy condition; reduce numbers of elk wintering along the Madison face, and cooperate in the management of elk habitat to provide maximum hunter opportunity for harvesting older bulls under conditions characterized by high natural security, a diversity of roaded and trail access and minimum road densities.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 875,500 acres of occupied elk habitat.
- 2) Promote and encourage maintenance of elk winter range values (quantity and quality) on privately-owned lands that are crucial to elk populations.
- 3) Maintain elk security levels so that elk harvest is distributed throughout the hunting season, with no more than 30% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Through the use of conservation easements, leases, land trades and/or fee title acquisition, encourage landowners along the Madison face to maintain elk winter range in an agricultural base rather than subdividing their property.
- Identify areas where road closures are necessary to enhance elk security and work with land managers to reduce open-road densities in those areas, to include additional road closures in the Hebgen Lake Basin.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 5,300-5,800 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 40 per 100.
- 4) Provide an annual harvest of 450-600 antlered and 550-700 antlerless elk during the general season. A late-season harvest of 500-600 antlerless elk will continue until population management goals are attained.
- 5) Maintain an annual BTB harvest comprised of at least 15% 6-point or larger bulls.

- 6) Provide a minimum of 23,700 days of hunting recreation annually for approximately 4,600 hunters during the general season.

POPULATION MANAGEMENT STRATEGY

The elk population wintering along the Madison face south of Indian Creek will be reduced by approximately 1,000 to bring elk numbers within the range of landowner tolerance. The wintering elk population on the Bear Creek WMA will be reduced by about 200. Late-season antlerless harvest will be reduced along the Madison face when population management objectives have been attained or if landowner tolerance for elk increases.

Regulations: Current regulations include a five-week BTB hunting season with general and late-season antlerless harvest regulated by antlerless permits. In addition, antlerless licenses and permits will be used to regulate elk numbers on the Flying D Ranch near the Spanish Peaks Wilderness.

GAME DAMAGE STRATEGY

Because of the rugged backcountry nature of most of the Madison Range and the influence of Yellowstone National Park, use of antlerless permits during the general season, in conjunction with regularly scheduled late-season antlerless hunts, will be necessary to manage wintering elk numbers on private land along the Madison face.

ACCESS STRATEGIES (to maintain current levels of public access):

DFWP will:

- Work with the USFS and Plum Creek Timber Company to maintain current cooperative road closures.
- Encourage the USFS to maintain a good trail system.
- Work cooperatively with the USFS and private landowners to secure public trail access to public lands along the Madison face between Indian Creek and Papoose Creek.

PIONEER EMU

(Hunting Districts 329, 331 and 332)

Description: Located immediately west of Dillon and extending to the Big Hole Valley, most of this 2,040-square-mile unit is steep and moderately to heavily timbered. About 55% of the land base lies within the Beaverhead National Forest.

Public Access: Most of the unit is easily accessible, with some exceptions along the west face of the West Pioneer Mountains in HD 332. The only secured public access in this portion of the unit is in the Steel Creek and Doolittle Creek areas. Roadless areas exist in portions of the unit, with the most extensive roadless areas located along the Continental Divide in HDs 331 and 332.

Elk populations: The elk population, which now stands at nearly 3,000, has increased steadily in recent years. Relatively low open-road densities foster good elk security. Numbers of elk wintering on the east side of the Big Hole (HD 332) may be above carrying capacity during severe winters. While existing elk densities are a concern on some winter ranges, there is adequate forage on public lands elsewhere in the unit, including the Rocky Hills and the east face of the East Pioneer Mountains, to support additional elk.

Recreation Provided: The unit provides 27,500 days of hunting recreation for about 4,000 elk hunters each year. During winter the best opportunities to observe elk are between Jackson and Wisdom, along the edge of the timber east of State Highway 278.

Current Annual Elk Harvest: 600-800 (400-500 antlered and 200-300 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated support for maintaining the existing recreational character of the unit. Although interest was expressed for increasing the number of older bulls in the harvest, the public also expressed a desire to maintain the current harvest level for raghorn bulls and to maintain or reduce harvest of 6-point bulls. People expressed support for stated habitat strategies. Timber interests commented that the elk plan is uncompromising with regard to logging and that it should place more emphasis on long-term vegetation management, including use of timber harvest to replace the historic role of fire in timbered habitats. Both support and opposition were expressed for DFWP acquisition of additional elk winter ranges.

MANAGEMENT GOAL

Manage elk populations in a healthy condition and cooperate in the management of elk habitat with emphasis on maximizing hunter opportunity to harvest older bulls in a backcountry setting.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 951,720 acres of occupied elk habitat.
- 2) Work with the USFS to inventory fall elk security areas between Moose-Walker and Carroll Hill (to be completed by October 1992).
- 3) Work with land management agencies to identify and map key sagebrush elk winter ranges (to be completed by October 1992).
- 4) Work with land management agencies to maintain fall elk security areas so that elk harvest is distributed throughout the season, with no more than 30% of the harvest taken during the first week of the general season.
- 5) Work with the USFS to inventory areas where past logging activities have been documented to have detrimental impacts on bull survival (to be completed by October 1993).

HABITAT MANAGEMENT STRATEGIES (to be applied to all hunting districts):

- Identify and promote protection of undisturbed blocks of timber cover that serve as important elk security areas.
- Protect elk security values in migration corridors. With the onset of fall snowstorms, elk move through areas currently designated as MA 16, 18, 19, 20, 21 and 26 as they migrate to traditional fall/winter ranges.
- Protect areas of timber cover adjacent to key fall/winter ranges where roading and logging activities have the greatest potential to increase vulnerability of bull elk.
- Explore the possibility of providing incentives to private landowners who agree not to destroy key sagebrush areas, and who agree to allow a reasonable level of public elk hunting.
- Work with USFS to obtain information on elk movements and identify key security areas in portions of the EMU where such information is lacking.

Specific strategies for HD 332:

DFWP will work with land management agencies to accomplish the following habitat strategies:

- Encourage obstruction of sections of the South Fork and North Fork of Doolittle and Steel Creek roads to reduce the impacts of these roads on fall elk security.
- Prevent creation of major "loop" roads including those that would result from connecting the Bull and Steel Creek roads and the Doolittle and Bryant Creek roads.
- Discourage second-entry logging at the head of Alder Creek, where logging and roading have made bull elk very vulnerable as they travel from key security areas to fall/winter ranges.

- Maintain a secure travel corridor connecting Sawlog and Toomey creeks via Trident Meadows and Slidrock Mountain. In nearly the entire west half of HD 332 (from Tucker Creek to Butch Hill), fall security areas are separated from fall/winter range by strips of land designated as MA 16, 20 or 21. Removal of timber cover, including thinning, in known travel corridors would be detrimental to bull survival.
- Analyze the effects of large-scale second entry logging in the Triangle Park to Camp Mountain zone on security requirements of bull elk.
- Protect and maintain security values for the following travel corridors, which are important to the survival of bull elk:
 - The Salefsky Creek to Shaw Mountain complex
 - The South Fork of Doolittle Creek to Demijohn Creek complex
 - The corridor between Noyes Creek and Sand Lake
 - The area encompassing Triangle Park
 - The area encompassing the Sheep-Fox Creek to Deer-Camp Mountain complex
 - The Deer Mountain to Heath Creek/Jackson Creek/Knight Gulch/Woody Mountain complex
 - The Bear Wallow to Snyder Creek corridor
 - The existing road in the Harriet Lou area separates seasonal ranges. DFWP recommends that new logging roads in this area follow specifications detailed in the general guidelines.
- Establish rest-rotation grazing systems on the following key winter ranges: Sawlog, Toomey, Squaw, Salefsky, Doolittle, McVey, Steel, Sand, Sheep, Fox and Warm Springs creeks, and Butch Hill. In addition to improving forage on elk winter ranges, implementation of rest-rotation grazing systems may reduce winter elk depredation on privately-owned lands.
- Establish a rest-rotation grazing system on DSL-administered lands in the area of Mud Lake.
- Maintain Forest standards for domestic livestock forage utilization on elk winter range. The Steel Creek elk winter range is in need of immediate attention, as is the portion of the Big Hole where an elk feeding operation was conducted by landowners and hunter groups during the winter of 1988. DFWP will work with the USFS and with private landowners to set up a rest-rotation grazing system in the Steel Creek area to replace the existing two-pasture deferred system, which does not provide for wintering elk in dry years.
- Establish block management agreements to maintain hunter access and conservation easements designed to maintain elk habitat, primarily in the areas south of Steel Creek.

Specific Strategies for Hunting District 331:

DFWP will work with land management agencies to accomplish the following habitat strategies:

- Discourage additional roading and/or logging in the Vipond Park-Knobby Park areas (encompassing the proposed Buffalo-Triangle and Echo Gulch sales) until hiding cover

has been reestablished. An MA 20 area, located directly adjacent to Vipond Park, is situated within this key travel corridor.

- Encourage evaluation of the cumulative impacts of logging operations planned by both USFS and BLM for areas adjacent to the Nez Perce-Cattle Gulch elk winter ranges and Vipond Park. Cumulative impacts should be addressed in the environmental assessments (EAs) produced by both agencies.
- Identify elk movement corridors and important elk security areas in the Adson Creek-Swamp Creek complex.
- Discourage additional timber removal in the Jacobsen Meadow area, in light of the recent Elkhorn and Price-Wise sales in the Elkhorn-Sheldon Creek areas.
- Encourage maintenance of existing timber cover in the area north of Rainbow Lake, extending northwest to Long Lake. This area was recently identified as being important to elk and was excluded from the Willow II timber sale.
- Monitor radio-marked elk to determine the location of important fall security areas used by elk that winter in the Nez Perce-Cattle Gulch areas.

Specific Strategies for Hunting District 329:

DFWP will work with land management agencies to accomplish the following habitat strategies:

- Maintain a secure travel corridor between Brays Canyon and Browns Canyon and the Andrus Creek/Cow Cabin Creek/Fox Creek summer/fall area to provide needed security for bull elk. Logging and roading associated with the Buffalo Creek timber sale resulted in loss of hiding cover in this area.
- Maintain the integrity of important fall security areas and elk calving areas, to include the following:
 - The area between Glidewell Creek and Brays Canyon
 - The area between Coyote Creek and Jensen Creek
 - The Dry Hollow area
 - The Coyote Creek area
 - The area between Fox Creek and Cow Cabin Creek. DFWP will discourage construction of an additional road into the area between Fox Creek and Carroll Hill. If the Andrus sale is logged, the importance of the uncut portion of the area north of Nellie's Gulch will be increased.
 - The area between Eunice Creek and Goldstone Mountain
- Prevent establishment of roads in locations where they will bisect important travel routes (e.g., between feeding and security areas as in the case of the road from Thayer Creek to Fox Creek).

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 2,700-3,200 elk.

- 2) Maintain as a minimum, the existing observed late-winter bull:cow ratio of 7-8 per 100 (HD 329 currently maintains about five bulls per 100 cows, due in part to low elk security).
- 3) Maintain a diverse bull age structure similar to the bull age composition that has existed in this unit from 1985 to the present.
- 4) Provide an annual harvest of 500-750 antlered and 200-400 antlerless elk.
- 5) Provide 35,000 days of hunting recreation annually for a minimum of 4,500 hunters.

POPULATION MANAGEMENT STRATEGIES

Elk numbers in the portion of HD 332 that lies south of the Steel Creek road will be reduced to avoid substantial elk losses during severe winters (and the potential issue of winter elk feeding) and to maintain numbers of elk wintering on private lands within landowner tolerance. Elk numbers will also be reduced in the Grasshopper area (portions of HDs 329, 331 and 332). Existing population levels will be maintained in the north portion of HD 332.

Regulations: Current regulations include a five-week any-bull hunting season with the antlerless harvest regulated by permits.

GAME DAMAGE STRATEGIES

- Utilize block management, or special seasons if necessary, to address game damage on privately owned lands. Priority areas will include the portion of HD 332 south of Steel Creek and portions of HDs 329, 331 and 332 comprising the Grasshopper drainage.
- Late hunts have been implemented on private lands near the Scudder Creek winter range, the site of elk depredations in recent years. This situation is largely the result of mild weather during hunting season, which has kept antlerless harvest below targeted levels.
- The East Pioneer Stewardship Committee will continue to provide a forum for addressing problems concerning big game on private lands.

ACCESS STRATEGIES (to maintain hunting access at current levels):

- To ensure an adequate elk harvest in the south half of HD 332, DFWP will work with private landowners to maintain hunting access, with the use of block management agreements and provisions of the game damage policy.
- DFWP will encourage the USFS to pursue land exchanges with willing private landowners to acquire isolated tracts of private land located within national forest boundaries, and to provide access to key tracts of public lands, to include:
 - access to Steel Creek across Clemow Ranch land.
 - access to Salefsky Creek and Sawlog Creek.

Pioneer EMU

- land exchanges in the area between Bear Lake and Woody Mountain, Jerked Prairie and Jacobson Meadows.

TOBACCO ROOT EMU

(Hunting Districts 320 and 333)

Description: The Tobacco Root Mountains are a small isolated mountain range that lies between the Madison, Jefferson and Ruby rivers, south of Whitehall. This 626-square-mile EMU features a considerable amount of timbered habitat in steep and rugged terrain. Most of the elk winter range in the Tobacco Roots is on private lands managed for livestock and hay production.

Public Access: Due to its rugged terrain and high alpine peaks, the central portion of the unit has limited road access. Most of the periphery of the unit is easily accessible except for the east side, where landowner restrictions limit public access.

Elk populations: Timber cover and rugged terrain provide good elk security. The elk population, which numbers between 800 and 900, winters almost exclusively on private lands and has been managed at levels below carrying capacity of elk habitats to avoid exceeding landowner tolerance for numbers of wintering elk.

Recreation Provided: The unit provides 8,700 days of hunting recreation for 1,600 hunters each year. Wintering elk can be viewed in the mornings and evenings just north of the Valley Garden Golf Course at Ennis.

Current Annual Elk Harvest: 250-350 (120-150 antlered and 130-180 antlerless). The bull harvest has been composed of 36% yearlings and 64% 2 1/2-year-old or older bulls.

SUMMARY OF PUBLIC COMMENT

Limited public comment indicated general satisfaction with the current recreational character of the unit. Interest was expressed in increasing total numbers of bull elk in the population as well as numbers of older bulls harvested. Game damage was an issue of concern. There was strong support for maintaining or improving elk security as well as maintaining existing levels of road access. Timber interests commented that the elk plan is uncompromising with regard to logging and that it should place more emphasis on long-term vegetation management, including use of timber harvest to replace the historic role of fire in timbered habitats. Many people expressed an interest in increasing public hunting opportunity by securing at least one key elk winter range.

MANAGEMENT GOAL

Manage for a stable elk population with a maximum sustained harvest of 2 1/2-year-old or older bulls; maintain hunter opportunity for bull hunting; limit illegal mortality, and cooperate in the management of elk habitat to maintain a healthy elk population.

HABITAT OBJECTIVES

- 1) Work with land management agencies and private landowners to maintain or improve range condition on elk summer ranges, key elk calving areas and sagebrush winter ranges.
- 2) Work with land management agencies to identify and map key elk winter ranges (to be completed in 1992).
- 3) Work with land management agencies to maintain fall elk security so that elk harvest is distributed throughout the hunting season, with no more than 35-40% of the bull harvest taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

Areas of Emphasis: Portions of the east Tobacco Roots that are scheduled to be logged by the USFS, including Granite Creek, Stonewall Creek, Goodrich Gulch and Perry/Pole Canyon, all adjacent to elk winter ranges. While this list is not all-inclusive, it indicates areas of priority concern to DFWP based on planning documents produced by land management agencies.

In addition to habitat strategies outlined in the statewide portion of the elk plan, DFWP will pursue the following habitat strategies:

- Discourage timber harvest and associated road building adjacent to key elk winter ranges where such development has the greatest potential to increase elk vulnerability. If construction of new roads is considered in these areas, DFWP will recommend that they not cross important travel routes, (e.g., between security areas and feeding areas) and that they be designed to accommodate closure by obstruction.
- Discourage second-entry logging in areas where past logging activity has reduced elk security and had a detrimental impact on bull survival. These areas include but are not limited to Granite Creek and Mill Gulch, Ramshorn and Currant Creek, North and South Meadow creeks and North and South Willow creeks. DFWP will recommend that consideration of second entry to such areas be preceded by evaluation of existing elk security provisions. In less critical areas, second entry should be preceded by reestablishment of cover to a height of at least 10-15 feet.
- Identify key elk security areas for which the Management Area designation in the Beaverhead Forest Plan conflicts with elk security needs, and propose redesignation of some MA designations.
- Work with land management agencies to inventory areas where past logging activities have been documented to have detrimental impacts on bull survival.
- Cooperate with USFS and BLM in implementation of small-scale telemetry studies in areas where data are lacking on specific elk movements or location of key elk security areas.
- Cooperate with land management agencies in the review and evaluation of existing livestock allotment management plans to include AMPs that are scheduled for revision

by the respective land management agencies. DFWP will pursue application of the following habitat strategies in revision of all AMPs, with emphasis on the allotments listed below:

- Mill/Ramshorn, Wisconsin/Nugget, South Boulder, Perry Canyon, North Saddle, North Meadow, South Meadow Creek and Willow Creek USFS allotments, and the Strawberry Ridge and Georgia Gulch BLM allotments. While this list is not all-inclusive, it does include priority areas of concern to DFWP based on plans produced by land management agencies and scheduled to be implemented during the next five years.
- Incorporate the factor of landowner tolerance for elk on privately-owned winter range in the design of AMPs. Range management practices employed by public land management agencies should be designed to simultaneously provide needed winter forage on public lands and reduce winter elk use on private lands by encouraging elk to use public lands.
- Maintain and/or develop grazing systems for allotments that encompass elk habitat. These systems should incorporate an adequate amount of scheduled rest with pasture rotation based on plant phenology (annual development and reproduction) rather than continual or annual deferred livestock use.
- Develop or maintain livestock forage utilization standards and elk forage allocation standards for allotments encompassing elk winter range.
- Provide evaluations and recommendations on proposed burn projects for sagebrush, aspen and Douglas fir communities on public or private lands. Where applicable, DFWP will emphasize the value of such communities for elk calving, summer range or winter range.
- Promote maintenance of sagebrush communities on public lands to maintain vegetative diversity, soil cover, elk forage quality and quantity, important winter range values and cover in calving areas.
- Ensure that existing and new AMPs do not compromise elk winter range designations or forage availability on winter ranges as a result of secondary land treatments designed to reduce livestock use of riparian habitats.
- DFWP will explore the possibility of providing incentives to private landowners who agree not to destroy key sagebrush areas, while agreeing to allow a reasonable level of public elk hunting.
- Implement livestock grazing systems that provide adequate rest to allow regeneration in aspen stands following burns. (At least one year of rest should be provided following prescribed burns or cutting.) Prescribed burns or cutting in the absence of adequate rest from livestock use may simply accelerate loss of aspen stands.
- Retain Douglas fir (or other conifer) establishment on public rangelands. The "edge habitat" provided by conifers receives considerable use by elk. Burning of conifer establishment on public lands will retard succession and eliminate a habitat type preferred by elk.
- Encourage public lands managers to provide at least one full year of rest from livestock grazing following use of prescribed burn treatments to facilitate recovery of plant communities.

- In situations where prescribed burning is deemed necessary, encourage burning during spring to avoid exceeding the desired prescription and significant loss of soil cover that commonly occurs as a result of fall burning.
- Evaluate the appropriateness of livestock grazing at high elevations, including cirque basins.
- Pursue the potential for application of conservation easements, leases or acquisition for privately owned elk winter ranges on the north, east and south sides of the unit to ensure maintenance of elk populations and provide for a population level more reflective of the unit's habitat potential.
- Through the use of conservation easements, leases, land trades and/or fee title acquisition, encourage landowners with elk winter range to maintain their agricultural base rather than developing or subdividing their lands.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 800-900 elk.
- 2) Maintain a late-winter calf:cow ratio of at least 35 per 100.
- 3) Provide an annual harvest of approximately 120-150 antlered and 90-120 antlerless elk.
- 4) Provide a minimum of 8,700 days of hunting recreation annually for a minimum of 1,600 hunters.

POPULATION MANAGEMENT STRATEGIES

Regulations: The current hunting regulation is a five-week BTB season with the antlerless harvest regulated with antlerless permits.

Recent management strategies designed to provide more 2 1/2-year-old or older bulls for harvest have reduced the total bull harvest (compared to the previous any-bull regulation) have resulted in what may be significant illegal mortality. The resulting loss in hunter opportunity may be too high a price for attempting to manage for 2 1/2-year-old or older bulls in a unit where elk numbers are limited by landowner tolerance.

GAME DAMAGE STRATEGIES

DFWP will:

- Continue to manage the elk population within the constraints of landowner tolerance for elk on privately-owned winter ranges.
- Work with USFS and BLM to develop and/or maintain domestic livestock grazing management strategies and forage utilization standards on public lands on or adjacent to

elk winter ranges. The intent of this strategy is to reduce winter elk use on private lands by encouraging elk to use public lands.

ACCESS STRATEGIES (to increase hunting access where it is limited):

DFWP will:

- Identify opportunities for block management projects or other landowner cooperative programs, primarily on the north and east sides of the unit.
- Support and encourage efforts by federal and state agencies to secure access to public lands in these areas.
- Cooperate with USFS and BLM in evaluating use of off-road vehicles (ORVs) in specific areas; assess impacts of such activities on elk vulnerability and bull survival, and formulate necessary management actions.

TENDOY EMU

(Hunting Districts 300, 302 and 328)

Description: Located immediately south and southwest of Clark Canyon Reservoir, this 1,028-square-mile EMU extends to the Continental Divide between Monida Pass and Lemhi Pass, along the Idaho border. Most of the area is characterized by scattered timber cover, moderate road densities and moderate to steep topography. Most of the land area used by elk is administered by the Beaverhead National Forest or BLM, together comprising about 40% of the EMU's land base.

Public Access: Public hunting access is fairly good with the exception of the west side of the Tendos. However, the Forest Service plans to reroute the Mount Ellis access at some time in the future. Permission is required in certain areas to travel through private lands to access public lands. In these situations, public access is not secured for the future.

Elk Populations: Elk numbers, which are at about 2,000, have increased significantly in recent years. Mild winters, adequate winter forage on public land and good calf recruitment have all been factors in this increase.

Recreation Provided: This unit provides 7,500 days of hunting recreation to about 1,500 hunters each year. Wintering elk can be observed on the north end of the Rocky Hills from State Highway 278. Viewing opportunities are limited elsewhere.

Current Annual Elk Harvest: 350 (250 antlered and 100 antlerless).

SUMMARY OF PUBLIC COMMENT

Few public comments were received for this EMU. Those who did comment were generally satisfied with the unit's recreational character and supportive of current management direction.

MANAGEMENT GOAL

Manage the elk population in a healthy condition and cooperate in management of elk habitat to optimize opportunities to harvest elk.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 504,000 acres of occupied elk habitat.
- 2) Work with land management agencies to maintain fall elk security areas so that elk harvest is distributed throughout the season, with no more than 55% of harvested bulls taken during the first week of the general season.

- 3) Identify areas where road closures are needed to enhance elk security, and work with land managers to reduce current open-road densities by at least 10%.

HABITAT MANAGEMENT STRATEGIES

Specific Strategies for Hunting District 300:

- DFWP will promote consideration of elk security requirements in the planning of a logging operation on two sections of DSL land (East Fork Sheep Creek and Cabin Spring), both of which are important security areas in this sparsely timbered hunting district.

Specific Strategies for Hunting District 302:

- DFWP will promote development of a comprehensive road management plan by the public agencies involved in management of this low security area. The main Sourdough Creek access road, for example, has arteries branching onto almost every open ridge. These branches should be closed to motorized use.

Specific Strategies for Hunting District 328:

- DFWP will promote interagency coordination and cumulative impacts analysis for timber sales planned by federal agencies and DSL on lands in the following drainages: Frying Pan, Trapper, Bear, Everson, Black, Nip and Tuck and Divide creeks and parcels of public land north of Jeff Davis Peak. Due to the fact that elk security is already low in some of these areas, the impacts of past as well as future cover removal on elk security should be considered in an analysis of cumulative effects.
- Maintain adequate elk security in the areas listed above, as well as in the Horse Prairie area, to prevent displacement of elk onto adjacent private lands where hunting is limited or not permitted, thereby creating the potential for increased game damage and reductions in public hunting opportunity.
- Maintain elk security values on key parcels of DSL-administered lands, with emphasis on the following areas which, according to the DSL 6-year plan, are scheduled to be logged:
 - Some DSL parcels surrounding the Grasshopper drainage which comprise spring/fall/winter elk range. Past logging in Clark Creek increases the importance of cover to the south in White Creek. Naegle Creek includes spring/fall elk habitat, and the area south of Pole Creek receives spring/fall/winter elk use in most years. The Scudder Creek area is prime elk winter range.
 - Some DSL parcels in the Horse Prairie Creek area encompass important spring/fall/winter elk habitat.

- Maintain important sagebrush-dominated elk winter ranges associated with timber stringers. In addition to providing winter forage requirements, sagebrush in these areas serves as important elk calving cover.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 1,800-2,300 elk.
- 2) Maintain a minimum late-winter calf:cow ratio of 35 per 100.
- 3) Provide for an annual harvest of 250-300 antlered and 75-175 antlerless elk.
- 4) Provide 8,500 hunter recreation days annually for a total of 1,700 hunters.

POPULATION MANAGEMENT STRATEGIES

Regulations: Current regulations include a five-week any-bull hunting season in districts 300 and 328. A BTB regulation is in place in district 302. The antlerless harvest is regulated with antlerless permits.

Many of the elk in this unit are part of an interstate herd that ranges into Idaho. Under Idaho's current hunting regulations, younger bulls protected by a more restrictive regulation (i.e., BTB) would be harvested by Idaho hunters if not harvested in Montana.

GAME DAMAGE STRATEGY

Historically, game damage has not been a problem. However, dry conditions during 1988 prompted elk to move from public lands onto irrigated alfalfa east of Dixon Mountain.

Attainment and maintenance of stated population objectives should prevent game damage problems from occurring.

ACCESS STRATEGIES (to increase public hunting access in locations where it is currently insufficient):

DFWP will cooperate with land management agencies to:

- Develop short-term and long-term agreements to secure public access in the area between Dutch Hollow and Birch Creek in HD 300, where there is currently no public access, and to Four Eyes Canyon and Shearing Pen Gulch.
- Secure long-term public access into the Tendos via Limekiln Canyon, Deer Canyon and Kate Creek. Public access is a problem in the northern third of HD 302. An alternative

to the Kate Creek access point could be through the area north of Ellis Peak. Public access to Sourdough Creek through Muddy Creek will also be pursued.

- Accomplish public acquisition of key inholdings through land exchanges, to include: 1) The area at the head of Baker Canyon; 2) the area encompassing the drainage between Limekiln and Bell Canyon and 3) several key inholdings in Muddy Creek that are currently listed for sale.
- Secure additional public access into both the east and west sides of Horse Prairie Creek in HD 328 (south of the Donovan Ranch).

ELKHORN EMU

(Hunting District 880)

Description: This EMU encompasses the Elkhorn Mountains, an isolated mountain range just east of the Continental Divide and southwest of Helena. The unit encompasses more than 1,220 square miles, 375 of which are occupied by elk. More than 80% of the occupied elk habitat is in public ownership, administered by the Helena and Deerlodge national forests and BLM.

This unit is unique in that it encompasses a 175,000-acre area designated by the USFS as the "Elkhorn Wildlife Management Unit," the largest parcel of USFS land in the country dedicated to wildlife management. Federal designation of the Elkhorn Mountains as a wildlife management unit elevates wildlife as the primary resource in the area, with the intention that other land management activities occur only to the extent that they are compatible with maintaining or enhancing wildlife values.

Public Access: The Elkhorn unit provides a good diversity of hunting experiences, including motorized hunting on the periphery and walk-in hunting in the interior. There is ample road access to the majority of the unit. Road management has been implemented in recent years with the objective of enhancing elk security and providing improved hunting opportunity. Due to substantial loss of hiding cover caused by a 48,000-acre forest fire in 1988 and concern that lack of security could displace elk onto private lands, motorized travel within the burn area has been confined to designated routes.

Elk Populations: The elk population in the Elkhorns has increased during the past 25 years, but has stabilized in recent years at about 2,000 wintering elk. Approximately 90% of the herd utilizes public lands (USFS and BLM) during the summer and fall and 70% winters on public land (primarily USFS), making the Elkhorns one of the largest elk winter ranges managed by the USFS.

The Elkhorn Mountains have been the focus of an intensive long-term cooperative DFWP-USFS elk study initiated in 1982. The goal of this on-going project is to evaluate various elk hunting regulations (any-bull, BAB, and spikes legal/BTBs-by-permit) and how these hunting regulations affect bull survival, calf production and hunter satisfaction. The study is also designed to evaluate the effects of land management activities (prescribed fire, road management, livestock grazing, mining and logging) on the elk population.

Recreation Provided: The unit provides between 16,000 and 18,000 days of hunting recreation to about 2,800 hunters each year. The proximity of the Elkhorn Mountains to population centers, combined with good access by virtue of public ownership of most of the mountain range, has made the area popular for wildlife viewing during all seasons of the year. Popular areas for wildlife viewing include Tizer Basin, Casey Meadows, the Elkhorn and Crow Peak areas and the winter ranges in lower Crow Creek.

Current Annual Elk Harvest: 400 to 500 (60-70% bulls, roughly 25% of which are branch-antlered bulls).

PUBLIC COMMENT

Public comment in response to a 1990 DFWP hunter opinion survey and the "Elk Times" questionnaire indicated strong support for coordinating with land management agencies to maintain or improve elk security. Public comment also favored maintaining a diversity of hunting experiences, including roaded and unroaded hunting environments. Several comments expressed the need to closely monitor and coordinate elk management with timber harvest, mining and livestock grazing.

The hunter opinion survey was mailed in January 1990 to 741 elk hunters who had hunted the Elkhorn Mountains in 1989. The primary objective of the survey was to document opinions and attitudes about elk hunting in this area three years after implementation of a new elk hunting regulation that represented a pilot effort in the state. Results of the survey indicated that hunters had noticed a major change in the bull population following establishment of the spikes legal/BABs-by-permit regulation, most notably an increase in the number of older bulls. A majority of hunters (79%) support the decision to manage for older bulls with 80% believing the objectives of the new regulation have been met and 73% registering support for continuing the spikes legal/BTB permit regulation.

Although the spike legal/BTB regulation in the Elkhorns has been well supported by many recreationists using the area, it has also been strongly opposed by hunters and outfitters who object to regulations that restrict opportunities to harvest big bulls. Landowners expressed concern about elk population levels and associated game damage.

MANAGEMENT GOAL

Manage for a healthy and productive elk population at current levels with a diverse bull age structure; closely cooperate with public land management agencies and private individuals in the management of elk habitats, and maintain good opportunity for elk hunters to harvest elk.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 240,000 acres of occupied elk habitat.
- 2) Improve habitat conditions on publicly owned winter ranges (primarily USFS) so that the percentage of wintering elk using private lands is reduced from 30% to 10%.
- 3) Maintain and improve habitat conditions on public lands (USFS and BLM) so that 90% of the elk continue to utilize these public lands during summer and fall rather than moving onto private lands.

HABITAT MANAGEMENT STRATEGIES

Improving habitat conditions for elk is a high priority of the USFS because of the area's Wildlife Management Unit designation. The Helena and Deerlodge forest plans include goals to optimize summer and winter elk habitat in the Elkhorns. DFWP will work with USFS to pursue the following habitat strategies:

- Continued coordination to achieve consideration of elk habitat needs and elk hunting opportunity in resource management decisions involving timber, range, minerals and recreation.
- Design and implementation of land management strategies (associated with timber harvest, prescribed fire, road management, and livestock grazing) designed to attract elk away from private lands and encourage them to use public lands.
- Cooperative monitoring of road management on elk winter ranges, including adherence to restrictions for motorized vehicle use, to prevent elk from being displaced from publicly-owned winter ranges.
- Coordination with the Helena National Forest to assure that mining activities are carefully planned and subject to restrictions designed to prevent habitat loss and displacement of elk from public lands onto private lands.
- Cooperation with private land managers with the objective of maintaining elk habitat and public hunting access.

POPULATION OBJECTIVES

- 1) Maintain the current late-winter population of 2,000 elk
- 2) Maintain an observed late-winter bull:cow ratio of at least 15 per 100, with 10% of the elk population composed of antlered bulls.
- 3) Maintain the current late-winter bull population comprised of at least 50% BTBs.
- 4) Maintain the current annual harvest of 300 antlered and 150 antlerless elk.
- 5) Maintain the current annual bull harvest of 75% spike bulls and 25% BTBs.
- 6) Maintain the current 18,000 hunter recreation days for approximately 2,800 hunters each year.

POPULATION MANAGEMENT STRATEGIES

Efforts have been made to direct holders of antlerless elk permits to privately-owned lands with the objective of stabilizing the number of elk wintering outside the national forest boundary. In addition, coordination between DFWP and public land managers has focused on improving habitat conditions on public lands with the objective of attracting wintering elk away from private lands onto public lands.

Recent changes in elk management strategies, namely the institution of the spikes legal/branch-antlered bull permit regulation in 1987, have substantially changed the composition of the wintering elk herd from fewer than 5 bulls per 100 cows to 10-15 bulls per 100 cows. The objective of the new regulation was to increase the total number of bulls in the herd (especially older, larger bulls), prompted by hunter concern that the opportunity to harvest older bulls was diminishing and by concern that lower bull numbers could reduce calf production. Monitoring has indicated that the new regulation has succeeded in increasing the total number of bulls and improved the age diversity of the bull population. The average age of bulls as well as numbers of bulls harvested by permit-holders, have increased in each of the three years that the new regulation has been in effect. Almost 50% of the wintering bulls are two years old or older and an increasing proportion of the harvest is composed of bulls four years old and older.

During the past few years, a portion of the antlerless permits have been directed to the northeast portion of the unit where elk winter primarily on private land.

Monitoring: The elk population has been intensively studied during the past eight years. Approximately 5% of the cows and 10-15 % of the bulls have been radio collared each year and relocated periodically to determine seasonal movements, habitat use and yearlong mortality (natural, wounding, legal hunting and illegal kills). Population trends, reproduction and herd composition have been monitored annually through aerial surveys conducted on the unit's seven winter ranges.

Regulations: The current regulation includes a five-week general hunting season for spike bulls with harvest of BTBs and antlerless elk regulated by permit.

GAME DAMAGE STRATEGIES (to minimize conflicts stemming from elk use of private lands and to attract elk currently using private lands onto public lands):

- Problems with excessive elk use of private lands in the northeast portion of the unit have been alleviated by issuing antlerless permits valid only for that area. The same strategy will be used to reduce conflicts associated with increasing elk herds in the south and west portions of the unit. In addition, informal efforts will continue to direct antlerless permit holders to specific portions of the Elkhorns, where elk herds that use private lands are increasing. Letters will be sent to a portion of the antlerless permit holders encouraging them to contact specific landowners who are experiencing elk damage.
- DFWP personnel will continue to work closely with the USFS and BLM to improve range conditions, plan mining activities and regulate motorized access with the objective of providing attractive habitat conditions that will encourage elk to use public lands rather than private lands.

ACCESS STRATEGIES (to maintain access at current levels):

- The Elkhorns EMU currently provides a good diversity of hunting opportunity, with motorized hunting on the periphery and walk-in hunting in the interior. The recent elk hunter opinion survey indicated that about half the hunters surveyed felt that vehicle

access was adequate, while a quarter felt there was either too much or too little. Although it is not possible to please all hunters, it appears that the current level of access provides a good mix of motorized and non-motorized hunting opportunity which has not displaced elk from public to private lands.

- DFWP will continue to coordinate with the USFS and BLM in efforts to minimize additional roading associated with mining activities. In the event that additional roading is required, motorized vehicle restrictions may be necessary to prevent elk from moving onto private lands because of habitat disturbance and increased human activity.
- Private landowners in the Elkhorns have traditionally allowed public access and hunting. DFWP will continue to work closely with private landowners to maintain existing levels of public access and public hunting opportunity on private lands.

DEVIL'S KITCHEN EMU**(Hunting Districts 421, 423, 445 and 455)**

Description: This 1,520-square-mile EMU encompasses the north portion of the Big Belt Mountains between Great Falls and Helena. The portion of the unit east of Interstate Highway 15 (HDs 445 and 455) includes the Beartooth Wildlife Management Area and a portion of the Gates of the Mountains Wilderness, together comprising 90 square miles. Several large ranches operate in the vicinity of these public lands. Most of the land (81%) is privately owned and 19% is publicly owned. The portion west of I-15 (HDs 421 and 423) is comprised primarily of private lands (88%), with DSL and USFS administering 9% and 3% of the land base respectively.

Public Access: There is extensive public access to the public lands in this unit. Public hunting opportunity on private lands is severely restricted due to fee hunting and commercial outfitting. However, a number of larger ranches allow some antlerless elk hunting. An expanding elk population has prompted recent expansion of public hunting opportunity for antlerless elk.

Elk Populations: The elk population numbers approximately 3,800, with 500 in HDs 421 and 423, and 2,500 in HDs 445 and 455. Elk are widely distributed on public and private lands during late spring, summer and fall. Up to 1,500 elk from HDs 445 and 455 congregate on the DFWP-owned Beartooth WMA during winter. Elk numbers have been increasing in recent years due to inadequate harvest on some of the privately owned lands in HD 445. Efforts are currently underway to reduce elk numbers in parts of HD 445.

Recreation Provided: This unit provides 15,000 days of hunting recreation annually to some 3,000 hunters. Opportunities to view wildlife on public lands abound during the summer and fall months. Winter elk viewing opportunities are very limited due to migration of elk onto public winter ranges to which public access is restricted to minimize elk disturbance.

Current Annual Elk Harvest: 775 (350 antlered and 425 antlerless). The current level of antlerless elk harvest reflects herd reduction efforts in areas where elk make exclusive use of private lands during the winter months. The male elk harvest consists of 55% yearlings, 37% BABs and 8% calves.

SUMMARY OF PUBLIC COMMENT

Public comment spanned a wide spectrum. Although strong support was registered for increasing the elk population, there was also strong support for substantial reductions. There was support for increasing elk hunting opportunities (especially for bull elk) on private lands, but also a desire to shorten hunting seasons. Support was expressed for expansion of the Beartooth WMA through acquisition of additional elk winter range. Game damage was identified as a serious problem. It was also felt that landowners who do not allow free public

MANAGEMENT GOAL

Reduce elk numbers in HD 445 to a level acceptable to landowners (600 postseason), maintain current elk numbers throughout the balance of the unit and cooperate with private and public land managers to provide optimum opportunity to harvest elk.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage private and public land managers to maintain 740,500 acres of occupied elk habitat.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 30% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Continue to cooperate with the Helena National Forest in planning management actions in the Gates of the Mountains Wilderness area (in HD 455).
- Continue to improve the quality and quantity of elk habitat on the Beartooth WMA by means of habitat manipulations and travel and camping restrictions.
- Develop cooperative livestock grazing programs with private landowners.
- Explore opportunities to develop cooperative, prescribed fire treatments to maintain or enhance important elk habitats.
- Develop and periodically update management guidelines and a management area plan for the Beartooth WMA.
- Coordinate with and seek recommendations from interest groups and advisory committees concerning management issues on private lands.

POPULATION OBJECTIVES

- 1) In HDs 445 and 455: Maintain an observed late-winter elk population of 2,100-2,300 by reducing the number of wintering elk in HD 445 from 1,000 to 600 (reflects 200 elk in the Jones Hills/Pinnacles to Sheep Creek area and 400 elk in the Hound Creek/Millegan area) and maintain an observed wintering elk population of approximately 1,500 on the Beartooth WMA.
In HDs 421 and 423: Maintain an observed late-winter elk population of 500.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100.

- 3) Maintain a short-term annual harvest of approximately 350 antlered and 600 antlerless elk during the ongoing herd reduction effort in HD 445 and a long-term annual harvest of approximately 250 antlered and 350 antlerless elk (following herd reduction).
- 4) Achieve an annual bull harvest comprised of 50% BTBs of which 15% are 6-point bulls.
- 5) Provide 15,000 recreation days annually for 3,000 hunters during herd reduction, and 10,000 recreation days for 2,500 hunters following herd reduction.

POPULATION MANAGEMENT STRATEGIES

Regulations: For the short term, a five-week any-bull hunting regulation will be continued to provide maximum hunting opportunity. The antlerless harvest will be regulated with antlerless permits. Antlerless harvest will be increased during herd reduction efforts in HD 445 to reduce the number of elk wintering on private lands to approximately 600. The elk herd wintering on the Beartooth WMA will managed at the 1,500 level.

In the long term, more restrictive bull hunting regulations and a more liberal season for antlerless elk may be proposed in conjunction with a block management program on private lands in HDs 445 and 455. These regulation changes would respond to public desire for improved opportunities to view larger, branch-antlered elk in these hunting districts.

GAME DAMAGE STRATEGIES

- Reduce postseason elk numbers in HD 445 from 1,000 to 600.
- Provide forage on the Beartooth WMA for 1,500 wintering elk.
- Establish block management programs to provide hunter access to private lands in HD 445 to facilitate adequate elk harvest levels.
- As a participant on the Devil's Kitchen Advisory Committee (which includes representatives from the landowner community in HD 445, hunters and representatives of other public land management agencies), continue to seek cooperative solutions to elk-related problems.

ACCESS STRATEGY (to increase hunter access to private lands in HD 445):

Establish block management agreements and explore new and innovative means to adequately meet needs of landowners.

SWEETGRASS HILLS EMU

(Hunting District 401)

Description: This 410-square-mile EMU is located in Toole and Liberty counties, adjacent to the Canadian border. It is comprised of 90-95% privately-owned lands in and around the Sweetgrass Hills, a series of three small mountainous areas surrounded by native grassland and dryland farms.

Public Access: A successful access management program has been developed through the cooperative efforts of local landowners, hunters and DFWP. Recreationists, primarily hunters, access the Sweetgrass Hills on foot or by horseback from designated parking areas.

Elk Populations: Elk populations have slowly increased in recent years and currently number 275. Elk using the Sweetgrass Hills also range north of the international boundary on a seasonal basis.

Recreation Provided: The unit provides 500 days of hunting recreation to about 150 hunters annually. Non-hunting recreational use of the Sweetgrass Hills is also significant due to the proximity of the communities of Cut Bank, Shelby and Chester. Wildlife viewing opportunities are available to those who hike into more inaccessible areas.

Current Annual Elk Harvest: 40 (15 antlered and 25 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment reflected a spirit of cooperation among hunters and landowners, a result of the successful walk-in program. Some landowners expressed a desire to reduce the elk herd to 150. Hunters have expressed a desire to expand the walk-in area.

MANAGEMENT GOAL

Manage the elk population at the current level of 275 and cooperate with private and public land managers in the management of elk habitat to provide a diversity of elk-hunting experiences.

HABITAT OBJECTIVE

Develop cooperative programs that encourage private and public land managers to maintain 75,000 acres of suitable elk habitat.

HABITAT MANAGEMENT STRATEGY

Management activities will include coordination with BLM and private landowners to ensure that grazing, mining and timber harvesting do not degrade important elk habitats. Emphasis will be placed on maintaining high-quality rough fescue grasslands for forage production and Douglas fir/lodgepole pine stands for cover.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 275 elk (current level).
- 2) Maintain an observed late-winter bull:cow ratio of at least 15 per 100.
- 3) Provide an annual harvest of 10-20 antlered and 20-40 antlerless elk.
- 4) Maintain an annual bull harvest comprised of 30% BTBs (2 1/2 and 3 1/2-year-olds) and 20% 6-point bulls (4 1/2 years old and older).
- 5) Provide 500 days of hunting recreation annually for a total of 100 hunters.

POPULATION MANAGEMENT STRATEGY

Total elk numbers are approaching the upper limit of acceptance by area landowners, so an increase in the antlerless quota may be necessary.

Regulations: Current regulations include a five-week permit-only hunting season and an either-sex archery season. Archers are not required to have a permit during the archery season. Increased public access to important fall security areas may result in fewer permits offered and possible limitations on the number of archers allowed to hunt in the area.

GAME DAMAGE STRATEGY

Landowner tolerance for elk numbers will be assessed through liaison with area landowners.

ACCESS STRATEGY (to maintain hunting access at current levels):

Existing walk-in areas will be monitored for hunter and landowner satisfaction, and adjustments made where necessary. Support should be continued for the current block management program and opportunities explored to expand it.

HIGHWOOD EMU

(Hunting District 447)

Description: This 682-square-mile EMU consists of a block of mountainous national forest land east of Great Falls interspersed with and surrounded by privately owned foothill grassland habitats and croplands. Elk occupy 205 square miles of land base. Approximately 85% of the unit is privately owned, with the remaining 15% in public ownership.

Public Access: The public land in this unit is currently accessible by two public roads; one that bisects USFS land and one that accesses the forest boundary from the north. The Lewis and Clark National Forest is currently negotiating with landowners to obtain public access on the south and east sides of the Highwoods.

Elk Populations: The unit has a stable postseason population of approximately 375-425. Elk traditionally occupy public land during summer and fall, and private lands during winter and spring.

Recreation Provided: The unit provides approximately 2,700 days of elk hunting recreation to 300 hunters each year. Elk viewing also occurs along public roads and trails.

Current Annual Elk Harvest: 120 (50 antlered and 70 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment spanned a wide spectrum, with some people desiring greater numbers of elk and others wanting elk numbers stabilized or reduced to limit game damage and reduce numbers of hunters afield. Strong support was expressed for obtaining more hunting access.

MANAGEMENT GOAL

Maintain a stable elk population at its current level of 375-425 (postseason) and provide elk hunting opportunity for 300 hunters annually.

HABITAT OBJECTIVE

Develop cooperative programs that encourage private and public land managers to maintain 130,560 acres of suitable elk habitat.

HABITAT MANAGEMENT STRATEGIES

- Initiate cooperative prescribed burning programs on seasonally important elk ranges to maintain a mosaic of elk habitat types.

Elk habitat conditions have been and are expected to remain fairly constant. Logging, mining, road building and other developments with potential to impact elk security on public lands are not anticipated.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 375-425 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 15 per 100.
- 3) Provide an annual harvest of 50 antlered and 70 antlerless elk.
- 4) Maintain an annual bull harvest comprised of 60% BTBs, of which 20% are 6-point bulls.
- 5) Provide 1,000 days of hunting recreation for a total of 300 elk hunters annually.

POPULATION MANAGEMENT STRATEGY

Regulations: A minimum five-week permit-only general hunting season and a minimum five-week unlimited archery season will be continued.

GAME DAMAGE STRATEGY

Stabilize the observed elk population at 375-425 postseason (currently acceptable to landowners).

ACCESS STRATEGIES

DFWP will:

- Cooperate with the Lewis and Clark National Forest and private landowners in negotiating easements to the national forest through private lands. Ideally, vehicle access should be permitted only to the national forest boundary.
- Support efforts by the USFS to obtain additional public access to the Highwood Mountains along the east and south boundaries of the Lewis and Clark National Forest.
- Negotiate with private landowners to provide public hunting access utilizing new and existing block management agreements.

LITTLE BELT-CASTLE MOUNTAINS EMU

**(Hunting Districts 413, 416, 418, 420, 432,
448, 449, 452, 454 and 540)**

Description: This 4,017-square-mile EMU encompasses the Little Belt and Castle ranges in central Montana. The principal land manager is the Lewis and Clark National Forest. Both ranges are surrounded by privately owned lands, many of which extend well into coniferous elk habitat. Land use on private lands consists primarily of cattle ranching. About a third of the occupied elk habitat is privately owned and just over half (55%) of the winter range is located on private land, with the remainder on federal lands and the DFWP-owned Judith River and Haymaker WMAs. Although most elk use of private lands occurs during winter, elk in recent years have begun to spend longer portions of the year on private lands.

Public Access: While portions of the unit have high road densities, providing easy public access by vehicle, other areas are reasonably remote and better suited to backcountry types of recreation. Public access to private lands on the periphery has become very restricted in recent years, resulting in increased hunting pressure on adjacent national forest lands as well as those private lands still open to the public. Block management agreements with five landowners currently provide access to around 140,000 acres of private and public lands. The continuation of these block management areas is tenuous however, due to a local trend among private landowners to lease elk habitat to outfitters and/or charge fees for hunting on their land.

Elk Populations: Elk in this unit number approximately 3,500. Elk numbers have increased and distribution has slowly expanded over the past 20 years. Eighteen wintering herds occupy traditional seasonal ranges in both mountain ranges, with some elk moving frequently between mountain ranges on a frequent basis. Total elk population size is determined by the amount and availability of winter range and landowner tolerance for wintering elk. Reductions in elk security on public lands and the closure of large blocks of private land to the general public have resulted in concentration of elk on private lands where they are unavailable to the public during the hunting season. This redistribution of elk onto private lands has resulted in game damage problems.

Recreation Provided: The unit provides 45,000 days of hunting recreation to approximately 9,800 hunters each year. Summer and winter recreational use is also very popular. Photo and viewing opportunities abound; however, these activities are somewhat constrained by seasonal elk movements onto private lands or onto public lands managed as winter ranges with restricted public access during the winter season.

Current Annual Elk Harvest: 1,300 (750 antlered and 550 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated general satisfaction with the existing recreational character of the unit. Public comment was generally adverse to expanding road construction and logging on either

public or private lands. Timber interests commented that the elk plan is uncompromising with regard to logging and that it should place more emphasis on long-term vegetation management, including use of timber harvest to replace the historic role of fire in timbered habitats. More restrictions on ATV use was suggested. Strong interest was expressed for DFWP acquisition of additional winter range to complement the Judith River WMA and acquisition of similar critical elk wintering areas in the Little Belt Mountains. Landowners who have substantial numbers of elk on their lands during the winter have expressed a desire to reduce wintering elk populations. Several landowners also expressed interest in entering into conservation easements or eventual DFWP acquisition of historic elk winter ranges currently in their ownership.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at current population levels and cooperate with private and public land managers in management of elk habitats to optimize hunting and harvest opportunities.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 1.3 million acres of occupied elk habitat.
- 2) Maintain elk security levels so that elk harvest is distributed throughout the general hunting season, with no more than 40% of the bull harvest occurring during the first week of the season.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Participate in land management planning to improve grazing practices on seasonal elk ranges, including incorporation of elk habitat needs in range analysis and monitoring of grazing allotments on USFS and BLM lands.
- Initiate cooperative prescribed burning programs on winter ranges and other important seasonal elk ranges subject to conifer encroachment, including areas adjacent to the Judith River WMA.
- Encourage land management agencies to exclude timber harvest from areas that provide critical elk security and encourage deferment of additional timber harvest from areas that previously provided important elk security, but currently cannot provide adequate security because of the cumulative effects of past timber harvest and associated road construction. The South Fork of the Judith River, Jumping Creek and Moose Creek are of concern in this regard.
- Cooperate with USFS to permanently close new roads built for timber harvest access and seasonally close existing roads where closures will significantly enhance elk security. Priority areas for road closures include Adams and Jumping creeks, Moose and Sheep

creeks and the South Fork of the Judith River area. DFWP will also cooperate with USFS to identify areas where travel restrictions or road closures are needed to enhance elk security.

- Encourage completion of a USFS inventory of existing road densities according to type of road and travel restrictions in place.
- Promote consideration of elk security requirements in planning processes conducted by public land managers.
- Identify and pursue conservation easements, lease or acquisition of fee title of key elk winter range with priority areas being near or adjacent to the Judith River WMA and in the southcentral portion of the Little Belts.
- Continue to monitor vegetation response to past agricultural practices on the Judith River WMA and implement vegetation management practices such as interseeding, cultivation and prescribed burning on previously disturbed/tilled sites to encourage healthy stands of forage nutritious and palatable to elk.
- Develop and periodically update management guidelines and a management plan for the Judith River WMA.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 3,500 elk.
- 2) Maintain an observed late-winter bull:cow ratio of at least 8 per 100.
- 3) Provide an annual harvest of 775 antlered and 525 antlerless elk.
- 4) Maintain an annual bull harvest comprised of 40% BTBs, 8% of which are 6-point bulls.
- 5) Provide 45,000 days of hunting recreation for a total of 9,800 hunters annually.

POPULATION MANAGEMENT STRATEGY

Regulations: In HDs 413, 416, 418, 432, 448, 449, 452, 454 and 540 elk harvest will be regulated with five weeks of any-bull hunting, with antlerless harvest by permit. Permit-only hunting will be maintained in HD 420.

Elk security on public lands is being reduced over a significant portion of the unit by intensive timber harvest activities and shifts in hunter distribution to public lands, prompted by closures on private lands. Consequently, the prospect of maintaining current hunting season regulations into the future is in doubt. Future elk hunting opportunity will be impacted by timber and road management programs outlined in the Lewis and Clark National Forest Plan and the continued trend of closing private lands to public hunting.

GAME DAMAGE STRATEGY

DFWP will negotiate block management agreements with private landowners to focus elk harvest on those herd segments judged most responsible for game damage.

ACCESS STRATEGY (to maintain and improve public access to public and private lands):

Negotiate with private landowners to provide public hunting access utilizing block management agreements, and maintain existing block management agreements. DFWP will continue to provide other kinds of assistance to landowners who have hunter management problems.

GRANITE BUTTE EMU

(Hunting Districts 284, 293, 839 and 843)

Description: The 1,230-square-mile Granite Butte EMU extends west from the Missouri River to Mineral Hill at the junction of Highways 200 and 141, from Avon to East Helena along U.S. Highway 12 and north to Lincoln and Holter Dam. About 50% of the unit is USFS land and 10% is administered by BLM. The Continental Divide bisects the unit and includes MacDonald, Priest, Stemple and Flesher passes.

Public Access: The unit is almost entirely open to hunting, and public access is plentiful for other forms of public recreation as well.

Elk Populations: The elk population has shown moderate but steady increases over the past 10 years and currently stands at roughly 1,800. Elk security on public and private lands has become limited in areas where timber harvest has reduced cover and roads have increased accessibility. Recreationists have driven off of existing roads, impacting elk security on private lands through creation of new travel routes.

Recreation Provided: Yearlong recreational use of the unit includes hunting, photography and wildlife viewing. The unit provides 21,000 days of hunting recreation annually to 3,800 hunters. A popular boat tour along the Missouri River features wildlife viewing.

Current Annual Elk Harvest: 440 (170 antlered and 270 antlerless).

SUMMARY OF PUBLIC COMMENT

Public comment indicated an interest in increasing numbers of older bulls in the population, improving bull:cow ratios and reducing the number of guides and outfitters. Concern was expressed that the six-week archery season is too long.

MANAGEMENT GOAL

Manage the elk population at its current level and cooperate with private and public land managers in management of elk habitats in order to provide diverse elk harvests and a diversity of hunting experiences. Emphasis will be directed at maintaining hunter opportunity by pursuing a combination of habitat objectives and creative hunting season regulations. Both hunting opportunity and elk security can be maintained through land-use management practices.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage private and public land managers to maintain 623,000 acres of occupied elk habitat.

- 2) Maintain elk security so elk harvest is distributed throughout the hunting season, with no more than 35 % of harvested bulls taken during the first week of the general season.
- 3) Identify areas where modification of land management practices is necessary to maintain or improve elk security.
- 4) Improve the capacity of public lands to sustain wintering elk, particularly in HD 843, where publicly-owned elk winter range is limited and where a portion of the elk population traditionally moves from west (HD 293) to east (HDs 843 and 839) of the Continental Divide to winter.

HABITAT MANAGEMENT STRATEGIES

A major habitat initiative in this unit is an interagency/private conservation project with participation by DFWP, USFS, BLM, Rocky Mountain Elk Foundation and Phelps Dodge Mining Inc. A Geographic Information System (GIS) had been applied to this EMU to facilitate identification of the cumulative effects of various land-use activities on elk numbers, distribution and movements. The technology to visually display cumulative habitat impacts and the interrelationships between various land uses will enhance the ability of federal and state land management agencies to address wildlife habitat issues cooperatively. This project will serve as a prototype for eventual GIS applications in other elk management units in Montana.

Management emphasis in this unit will be on habitat maintenance and enhancement. DFWP will work with land management agencies and corporate and private land managers to pursue the following strategies designed to improve elk security:

- Reduce open-road densities.
- Maintain or enhance vegetation structure that serves as important hiding cover for elk.
- Schedule human activities to avoid disturbance to elk during winter and spring.
- Implement road management programs on private lands where property owners are experiencing problems caused by unregulated vehicle use.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 1,800 to 2,200 elk.
- 2) Maintain an observed late-winter bull:cow ratio of 10-15 per 100.
- 3) Maintain a minimum late-winter calf:cow ratio of 35-45 per 100.
- 4) Provide an annual harvest of 170 antlered and 270 antlerless elk.
- 5) Maintain an annual bull harvest comprised of 40 % BTBs including 5-10% 6-point bulls.
- 6) Provide 21,000 days of hunting recreation for a total of 4,800 hunters each year.

POPULATION MANAGEMENT STRATEGY

DFWP will use habitat strategies, road management strategies and hunting season regulations to improve bull:cow ratios and foster a more diverse age structure among the bull segment of the population.

Regulations: A five-week elk hunting season will be conducted in HDs 293 and 839. A five-week limited archery season will be offered in HD 284. A seven-week season currently exists in HD 843 in conjunction with use of A-7 licenses. Antlerless harvest will be regulated with antlerless permits and/or A-7 licenses.

Elk redistribution appears to be occurring as a result of the seven-week hunting season in HD 843. The season may be modified if seasonal elk concentrations pose difficulties for habitat maintenance or private land owners. The purpose of the five-week limited archery hunt in HD 284 is to prevent elk use from conflicting with livestock grazing.

GAME DAMAGE STRATEGY

Summer/fall depredation on alfalfa and barley crops occurs in HDs 839 and 284 by non-migratory elk and some post-season complaints have been received in HDs 293 and 843. Such depredation will be discouraged with aversive conditioning tactics, kill permits or special early damage hunts. Winter range conflicts will be addressed by managing elk populations at levels in balance with winter habitat availability and landowner tolerance.

ACCESS STRATEGY (to maintain hunting access at current levels, provided that elk security is not reduced):

Programs to aid private landowners in controlling vehicle use on their lands will continue, and new road management programs will be implemented.

ABSAROKA EMU

(Hunting Districts 520 and 560)

Description: This 1,963-square-mile EMU is located on the north flank of the Beartooth and Absaroka ranges and includes the northern half of the Absaroka-Beartooth Wilderness. The majority of the land base (over 80%) is administered by the Custer and Gallatin national forests, but much of the elk winter range is comprised of small parcels of privately owned land used for cattle grazing and hay production.

Public Access: There is reasonable access in the Line Creek, Silver Run and Main Boulder areas, where public roads and trails bisect much of the fall elk range. Access to the remainder of the unit is somewhat limited, with elk distributed primarily on private lands or on public lands to which access is controlled by adjacent private landowners. The access situation has remained relatively stable during the past 15 years.

Elk Populations: Nearly 900,000 acres of elk habitat support approximately 1,700 elk, representing eight reasonably distinct elk populations. Elk numbers have increased dramatically during the past 10 years with most herds doubling or tripling in size. The increases are attributed to a series of mild winters in conjunction with limited antlerless elk harvest. Limited antlerless harvest is, in many cases, a result of access restrictions on private lands, especially in portions of HD 520. Although summer ranges are located primarily on public lands (except in the case of the Butcher Creek and Morris Creek herds), elk frequently move to privately owned winter ranges as early as mid-September. Ten percent of the unit's elk winter on the Point of Rocks WMA, which has alleviated some of the game damage potential.

Recreation Provided: The unit provides 7,700 days of hunting recreation to about 1,500 hunters annually. Winter elk viewing is also an important recreational use of the Boulder and Stillwater herds and is especially popular on the Silver Run winter range adjacent to the heavily used West Fork Rock Creek Road and the Beartooth Highway. Wildlife viewing is an important aspect of summer recreational use, particularly on the open plateaus in the Line Creek, Silver Run, Main Boulder and East Boulder areas.

Current Annual Elk Harvest: 175 (95-105 antlered and 70-80 antlerless). Nearly half (45%) of the bull harvest is comprised of BTBs.

SUMMARY OF PUBLIC COMMENT

Public comment was supportive of long-term maintenance of elk populations with emphasis on cooperation between DFWP and public and private land managers in the management of elk habitats. Public comment also suggested that public lands management should emphasize elk at the possible expense of other resource development. In addition, it was suggested that calf:cow ratios should be improved and that elk numbers and distribution should be expanded or at least maintained. A desire to improve bull:cow ratios was also indicated. Some people support an increase in BTB harvest without increasing the overall bull harvest while others

advocate maintaining existing hunting opportunity and harvest regulations. Support was expressed for increased use of the A-7 license, with some people voicing support for restricting all hunters to designated hunting areas but not restrictions on license sales. Permit-only hunting regulations and shortened seasons were generally opposed. In general, respondents favor providing elk security through additional road closures rather than implementation of more restrictive hunting seasons. The need to increase or at least maintain hunter access was expressed. Support was also expressed for both maintenance and reduction of current hunter numbers and hunter-days of recreation. The importance of non-consumptive uses of elk was emphasized.

MANAGEMENT GOAL

Stabilize elk populations at current levels (commensurate with available habitat on private and public lands) and cooperate in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 854,000 acres of productive elk habitats.
- 2) Maintain elk security so that elk harvest is distributed throughout the hunting season, with no more than 40% of the harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Cooperate with the Custer and Gallatin national forests in programs designed to improve vegetative diversity and increase carrying capacity of winter ranges by burning (Line Creek and Silver Run), reseeding (Stillwater), aspen enhancement (Boulder) and maintaining wildlife openings by reducing conifer encroachment (Boulder).
- Work with USFS to ensure that current open-road densities are not increased and encourage mitigation of any new road building through closure of an equivalent number of miles of existing roads.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter elk population of 1,700 (plus or minus 200), while reducing elk numbers in chronic game damage problem areas (Butcher Creek) and in areas where excessive elk numbers occur on private lands (Main Boulder) while allowing

populations to increase in suitable habitats upon agreement with private landowners (Bad Canyon/Trout Creek).

- 2) Maintain an observed late-winter bull:cow ratio of at least 15 per 100.
- 3) Maintain a minimum observed late-winter calf:cow ratio of 40 per 100.
- 4) Provide an annual harvest of 150-200 antlered and 150-200 antlerless elk.
- 5) Maintain an annual bull harvest comprised of at least 40% BTBs.
- 6) Provide 7,700 days of hunting recreation for a total of 1,500 hunters each year.

POPULATION MANAGEMENT STRATEGY

Regulations: Permit-only hunting is in force for the Line Creek and Silver Run elk herds. BTB hunting regulations are in effect for the Butcher Creek and Morris Creek herds. Any-bull regulations are in effect for the rest of the unit in conjunction with antlerless permits, except for elk populations in the Deer creeks area.

GAME DAMAGE STRATEGIES

DFWP will:

- Pursue efforts to increase the carrying capacity of winter ranges on USFS lands adjacent to chronic problem areas. Range improvement projects are a priority for the Line Creek, Silver Run, Stillwater and Main Boulder areas.
- Make an effort to reduce the Butcher Creek and Main Boulder populations through increased use of late-season antlerless permits.
- Establish a task force comprised of private landowners, outfitters, hunters and DFWP personnel to address elk management issues in the Morris Creek area.

ACCESS STRATEGIES

DFWP will:

- Identify important points of access to public lands and provide recommendations to the appropriate land management authority. Access programs will generally be designed to allow vehicle access to the boundary of USFS lands, with non-motorized traffic allowed beyond that point. Greater access to public land is needed in the Bad Canyon and Fishtail/ Fiddler Creek areas.
- Identify opportunities for block management projects and walk-in areas. A walk-in program will be maintained in the Ruby Creek/Gold Creek area.

CRAZY MOUNTAINS EMU

(Hunting Districts 315 and 580)

Description: This 1,684-square-mile EMU encompasses the entire Crazy Mountain Range in southcentral Montana and adjacent agricultural and range lands. The area is a mixture of private (87%) and public (13%) lands, including portions of both the Gallatin and Lewis and Clark national forests. (Completion in 1993 of pending USFS land acquisitions will increase public land ownership by 16%). Land ownership patterns within the boundary of the national forests are characterized by checkerboard ownership. The unit contains two roadless areas offering wilderness recreation, which encompass 149,467 acres of public and private lands.

Public Access: Public access is a problem in this unit. The checkerboard pattern of land ownership complicates management of habitat and roads. Roaded access to elk habitat is limited in most of HD 580. With few exceptions, public access to elk habitat on the north and east slopes of the Crazies is controlled entirely by private landowners. Access to much of the privately-owned elk habitat in HDs 315 and 580 is currently controlled by outfitters. Access to the forest boundary is better on the west flank, primarily a result of roads built to access public and private timber lands. Limited public access tends to create hunter congestion problems and concentrates hunting pressure in the vicinity of the few existing public access points. Ownership and public use of trails on checkerboard lands (USFS and private) is currently under litigation. A block management program initiated in 1989 has improved access in the upper Shields River basin and a similar program was initiated in 1991 in the Duck Creek area of the south Crazies. Access to USFS lands on the northwest corner (the Cottonwood Creek area) and the upper Shields River basin is expected to improve significantly over the next two years as the USFS moves forward to complete proposed acquisition of nearly 30,000 acres of private land.

Elk Populations: About 1,200-1,300 elk range over 460,000 acres of land in this unit. National forest lands provide spring, summer and fall habitat, but private lands provide over 80% of elk winter range during normal winters and virtually all of the available winter range in severe winters. Herds in the northeast and southeast corners have increased dramatically over the past 10 years due to lack of antlerless harvest and recent mild winters, which fostered good calf survival. Winter populations on the west side of the unit have been relatively stable during the past decade.

Recreation Provided: Each year this unit provides about 6,500 days of hunting recreation to 1,200 elk hunters. Lack of roaded access to much of the area limits wildlife viewing to primarily backcountry users. Wildlife viewing and photography by hikers, hunters, anglers and other recreationists comprise the majority of summer/fall use. There is little opportunity for the public to view elk during winter months.

Current Annual Elk Harvest: 297 average (179 antlered and 118 antlerless).

SUMMARY OF PUBLIC COMMENT

Maintenance of the current elk habitat base is a major public concern. Most comments pointed out that because the majority of this habitat is privately-owned, there is an urgent need to provide landowners with incentives to maintain or enhance existing elk habitat. Timber interests commented that the elk plan is uncompromising with regard to logging and that it should place more emphasis on long-term vegetation management, including use of timber harvest to replace the historic role of fire in timbered habitats. Public comment regarding population levels was mixed, with some people voicing support for maintenance of current elk numbers; some wanting more elk, and others calling for fewer elk. Landowners generally prefer that elk numbers be maintained at current levels or reduced. Many people expressed concern that outfitters and lease operations are restricting elk hunters too much while catering to wealthy or non-resident hunters. Other comments addressed the general lack of public access to elk habitat and the need for cooperative programs with land management agencies and private landowners to improve public access. At the same time, support was voiced for additional road closures to provide elk security. Methods preferred for managing elk numbers varied, depending on whether an increase or decrease in numbers was desired. However, the A-7 license appears to be acceptable to both hunters and landowners. There was also a general desire for increased opportunity to hunt larger bulls even if the end result is less overall hunter opportunity.

MANAGEMENT GOAL

Stabilize the elk population at current levels and cooperate in management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 460,000 acres of productive elk habitat.
- 2) Maintain and enhance elk habitat on public lands to encourage elk to use public lands rather than private lands, to minimize the potential for game damage on private lands and maximize public elk hunting opportunities.
- 3) Maintain elk security so that elk harvest is distributed throughout the season with no more than 40% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Work with USFS to protect elk security on national forest lands. Priority elk security areas include the Cottonwood Creek/Ibex area, West Fork Cottonwood Creek (north

Crazies) and the South Fork of the Shields River. Timber sales planned for these areas could reduce critical elk security on public lands. Completion of the USFS purchase of nearly 30,000 acres of private land in the north Crazies and upper Shields River area will consolidate public land holdings and simplify habitat management and road management.

- Work with USFS in HD 315 and the portions of 580 with roaded access to maintain a maximum open-road density of 1.0 mile/section on a drainage basis. The potential for road closures and establishment of walk-in areas in some of the more heavily roaded drainages, such as the upper Shields River basin, will also be pursued.

POPULATION OBJECTIVES

- 1) Maintain an observed late-winter population of 1,200-1,300 elk (current numbers) with population reductions in chronic game damage areas and increases where habitat conditions are suitable.
- 2) Maintain an observed late-winter bull:cow ratio of at least 10 per 100 in each herd.
- 3) Provide an annual harvest of 150 antlered and 150 antlerless elk.
- 4) Maintain a bull harvest comprised of at least 50% BTBs.
- 5) Provide 6,500 days of hunting recreation for a total of 1,200 hunters each year.

POPULATION MANAGEMENT STRATEGY

Efforts will be directed toward reducing the elk population in areas of chronic game damage, namely the northwest corner of the unit. Elsewhere, especially in the northeast corner of HD 580, management activities will focus on stabilizing or slowing population growth. The antlerless elk harvest will be regulated through use of antlerless permits. To be effective, this management approach will require hunter access to elk on private lands.

Antlerless permits are currently issued in both HD 315 (175/year) and HD 580 (200/year). In HD 580, the permits are directed to specific portions of the hunting district (100 permits west of Cottonwood Creek, 50 from Cottonwood to Sweet Grass Creek and 50 south of Sweet Grass Creek). Antlerless permit levels were recently increased in the northwest corner of HD 580 in response to chronic game damage. In 1990, antlerless permits were issued for the first time for the northeast corner of HD 580, with the objective of slowing herd growth in that portion of the unit.

Regulations: Current regulations provide for a five-week any-bull season in HD 315 and the portion of HD 580 north of Sweet Grass Creek. All elk hunting south of Sweet Grass Creek is by permit only (20 either-sex and 50 antlerless in 1990).

GAME DAMAGE STRATEGY

Reducing and/or preventing game damage is contingent upon hunters having access to elk on private lands.

Game damage complaints have been registered frequently from the northwest corner of HD 580 and portions of 315 (both winter haystack damage and late summer/fall hay and grain field damage). The number of antlerless permits will be increased in the northwest corner of HD 580 to reduce elk numbers. Whenever possible, hunters will be directed to problem areas. This may involve early or extended seasons for antlerless permit holders. Sites with chronic winter haystack damage will be priority candidates for permanent stackyard projects.

ACCESS STRATEGIES (to improve hunting access):

DFWP will:

- Provide support and encouragement to USFS to consolidate its holdings through purchases and/or trades, especially in areas with existing public access (such as Cottonwood Creek on the north end of the Crazies, the upper Shields River/Smith Creek area and the Big Timber Canyon area).
- Encourage USFS to obtain trail easements to existing blocks of public land (Comb Creek in the north Crazies and Rock Creek/Little Rock Creek and Swamp Creek in the south Crazies). The pending USFS land purchase will significantly improve both roaded and trail access in the north Crazies (Comb/Cottonwood Creek and the upper Shields River area).
- Encourage the USFS to pursue access into Swamp Creek, Sweet Grass Creek and the South Fork of the American Fork as outlined in the forest plan for the Gallatin National Forest.
- Meet with landowners to identify opportunities to improve elk hunting access on private lands (develop block management areas, walk-in areas, etc.). Recent additions to the block management program on the south end of the Crazies in HD 315 are encouraging.

SNOWY EMU

(Hunting Districts 411, 412, 511, 530 and 590)

Description: This 7,068-square-mile EMU includes the Judith, Big Snowy, Little Snowy, Moccasin and Bull mountains and the Pine Ridge Hills, all of which are isolated mountain ranges in central Montana. The shared similarity among these ranges is that they are all islands of timber, surrounded and isolated from one another by large expanses of prairie. The primary land use in this area is cattle grazing, with a limited amount of timber harvest. A large proportion of the occupied elk habitat is comprised of privately owned lands, with elk using private lands throughout the year. A portion of the Big Snowy Mountains is roadless (about 97,985 acres), offering wilderness values.

Public Access: While there is reasonable access to public lands, elk generally use private lands, where access is restricted during the hunting season.

Elk populations: For the following reasons, limited effort is devoted to gathering biological information on elk populations in this unit: 1) Elk populations are small, relative to elk populations in other parts of the state; 2) public access is limited, which therefore limits hunting opportunity, and 3) elk are scattered over a large geographic area, making it impractical to census the population. Population estimates for individual herds (based on 1990-91 winter surveys) are as follows: Big Snowies, 300-350; Little Snowies, 350-400; Bull Mountains, 150-200; Judith Mountains, 200-250 (including elk in the Moccasins), and Pine Ridge Hills, 70-100. In recent years elk populations have been increasing rapidly in the Big and Little Snowies and Judith Mountains and increasing at a slower rate in the Bull Mountains and Pine Ridge Hills.

Recreation Provided: In 1989, the unit provided 3,566 days of hunting recreation for 519 hunters. Almost all of the recreation provided by elk populations in this area is hunting-related, with wildlife viewing considered to be insignificant.

Current Annual Elk Harvest: Since 1983 the annual elk harvest has increased steadily. In 1989, 65 antlered (77% BTBs) and 82 antlerless elk were harvested.

SUMMARY OF PUBLIC COMMENT

Public comment fell into two distinct categories: Those who want the elk herd increased to habitat carrying capacity and those who want the elk population stabilized or reduced to minimize game damage. Landowners and hunters alike expressed support for maintaining a healthy, viable elk population. Several people suggested reducing livestock grazing on public lands and compensating landowners for game damage. Several expressed a desire to manage public lands primarily for elk. Others expressed concern about current bull:cow ratios. Half of those commenting wanted a population made up of 20-25% bulls, while the other half felt that 12% was a good population objective. Some interest was expressed in expanding the use of A-7 licenses.

MANAGEMENT GOAL

Perpetuate viable elk populations and elk habitats; provide hunter opportunity for harvesting older bulls, and maintain population levels within the constraints of landowner tolerance, but at a minimum of 1,000 animals.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage land managers to maintain 466,000 acres of productive elk habitat.
- 2) Improve elk security on public lands in the Little Snowies.

HABITAT MANAGEMENT STRATEGIES

DFWP will work with land management agencies and private landowners to:

- Identify tracts of public land that may have the potential to hold elk during the hunting season if beneficial habitat manipulations are initiated.
- Increase elk security on public lands associated with the Little Snowies through road closures during the archery and rifle seasons. Increased elk use of closure areas during the hunting season may lead to increased harvest.
- Develop a fire management plan on the north face of the Big Snowies that emphasizes the importance of wildfire for creating and maintaining elk habitat.
- Work toward protecting portions of the winter range in the Little Snowies through conservation easements.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 1,000-1,300 elk (current level).
- 2) Maintain an observed late-winter bull:cow ratio of at least 20 per 100.
- 3) Maintain an annual harvest of 100-130 antlered and 100-130 antlerless elk.
- 4) Maintain an annual bull harvest with a minimum of 50% BTBs and 20% 6-point bulls.
- 5) Provide 2,800 - 3,750 days of hunting recreation annually for a total of 500-700 hunters.

POPULATION MANAGEMENT STRATEGIES

DFWP will:

- Maintain close contact with landowners to determine tolerance levels for elk. Elk populations in the Big and Little Snowies will be monitored on an annual basis, with other elk herds in the unit surveyed at least once every three years.
- Identify areas used by elk in the fall and work with landowners to allow public hunting access in order to reduce elk populations in problem areas. Due to limited public hunting access to private lands, it has been difficult to manage elk populations using hunter harvest. Antlerless permits will be increased and/or the hunting season lengthened if private land holders will allow access to harvestable elk.

Regulations: Permit-only hunting regulations will be maintained for the foreseeable future, with the number of permits increased as populations increase, landowner tolerance decreases, and/or access to private lands increases.

GAME DAMAGE STRATEGIES

DFWP will:

- Stabilize populations at a level that is not detrimental to the majority of landowners.
- Direct hunting pressure to landowners with elk depredation problems.
- Increase numbers of antlerless permits in areas with the greatest depredation problems, contingent upon obtaining hunting access to affected private lands.

ACCESS STRATEGIES

The key to managing elk populations in this unit is developing public hunting access to private lands. Currently, access to some of the larger ranches is very restrictive.

- During the next five years, DFWP will make an effort to inform landowners of the population status of elk herds and the trade-offs between increased numbers of elk and increased hunting access.
- Identify needs for public access to public lands on the north face of the Big Snowies.

BEARPAW MOUNTAINS EMU

(Hunting District 690)

Description: Located in northern Montana, this 200-square-mile EMU encompasses the Bearpaw Mountains, about 30 miles south of Havre. The bulk of the land base is in private ownership.

Public Access: Because elk hunting in this unit is primarily a means to control game damage, access to private lands has traditionally been granted to elk permit holders. Access to elk hunting areas is largely by foot or horseback with vehicle retrieval allowed with permission.

Elk Populations: The 125 elk in this unit spend at least a portion of the summer on or adjacent to the Rocky Boy Indian Reservation. The rest of the summer use - and all of the spring and fall use - occurs on privately owned ranch lands and DSL parcels. In winter, elk move south of the Bearpaw Mountains to private and BLM lands in the Missouri River Breaks.

Recreation Provided: This unit provides about 65 days of hunting recreation for 15 hunters each year. Throughout the year, elk can be viewed occasionally from county roads in the Warrick vicinity.

Current Annual Elk Harvest: 9

SUMMARY OF PUBLIC COMMENT

Hunters thought the draft management goal and objectives were acceptable. Landowners voiced strong opposition to elk population increases on the basis that game damage is excessive at existing population levels. Landowners also thought that landowner preference permits should be valid anywhere in the unit. Some believe that current elk numbers have been underestimated.

MANAGEMENT GOAL

Maintain the elk population at its current level and cooperate in management of elk habitat to provide maximum elk hunting opportunity while controlling game damage. Because the Bearpaws is primarily a deer producing area, elk numbers will not be allowed to expand at the expense of the deer population.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 128,000 acres of occupied elk habitat.

- 2) Maintain elk security levels that will facilitate attainment of population and harvest objectives.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Cooperate with BLM, DSL and private land managers to identify and prioritize critical habitats that could potentially be protected through conservation easements or fee title acquisition.
- Work with private landowners to maintain existing grazing systems, public access and elk security levels.

POPULATION OBJECTIVES

- 1) Maintain a late-winter population of 75 elk.
- 2) Maintain an observed late-winter bull:cow ratio of 10 per 100.
- 3) Maintain a late-winter calf:cow ratio of 40 per 100.
- 4) Maintain an annual harvest of five antlered and 10 antlerless elk.
- 5) Provide 65 days of hunting recreation annually for 15 rifle hunters and 105 days of hunting recreation for 15 archery hunters.

POPULATION MANAGEMENT STRATEGY

To achieve management objectives for this unit, emphasis must focus on coordination with private landowners to maintain hunting access to private lands.

Regulations: The hunting season format will include five weeks of permit-only elk hunting.

GAME DAMAGE STRATEGY

Rifle hunting by permit will be used to accomplish a harvest adequate to prevent game damage problems.

ACCESS STRATEGY (to maintain hunting access at current levels):

Opportunities for block management agreements will be identified.

MISSOURI RIVER BREAKS EMU

(Hunting Districts 410, 417, 426, 621, 622, 623,
631, 632, 680 and 700)

Description: The Missouri River Breaks encompass 2,682 square miles of Fergus, Petroleum, Garfield, Phillips and Valley counties in northeastern Montana. Almost 85% of the EMU is comprised of public lands administered by either the BLM or the Charles M. Russell National Wildlife Refuge (CMR). Key portions of elk summer and winter ranges are located on privately owned lands. Of the unit's estimated 2,682 square miles of suitable elk habitat, approximately 1,687 square miles (63%) are currently occupied by elk. The best elk security areas are located in the timbered and riparian portions of the rough terrain along the Missouri River, known as the "Breaks". Elk habitat north of the Missouri River is restricted to a fairly narrow band with scattered patches of timber. Elk habitat south of the river is much more extensive and includes timbered drainages and riparian areas along the Musselshell River.

Public Access: Good public road access exists throughout the unit. The Missouri River and Fort Peck Reservoir provide unique opportunities for boat access to the area.

Elk Populations: The elk population currently numbers about 2,700. Although elk could extend their range far into the prairie, conflicts with agricultural land uses and lack of fall security areas justify maintaining this population at its current distribution. In portions of the unit, elk utilize private lands during both summer and winter. Game damage reports have been numerous during drought years. The elk management goal of the CMR is to reach or maintain a density of 2.5 elk per square mile on refuge lands and maintain a "typical" distribution of age classes.

Recreation Provided: Rifle hunting generates 1,240 days of hunting recreation by 365 permit holders annually. Archery hunting generates 8,355 recreation days for 2,434 archers. Motorized hunting access can be characterized as moderate to high. Excellent elk viewing opportunities are available along the Devil's Creek Road, Hell Creek Road, Slippery Ann Ridge and Bottom Road, Kendall Bottoms, Bell Bottoms, Rock Creek Road, Larb Hills Road and Harper's Ridge Road. There is also an educational, self-guided wildlife viewing route along the Bell Ridge Road near the Fred Robinson Bridge.

Current Annual Elk Harvest: 275 during the rifle season and 103 during the archery season.

SUMMARY OF PUBLIC COMMENT

Public comment indicated a strong preference for maintaining the trophy elk hunting opportunities in this unit. Landowners and hunters alike expressed concern about crop depredation caused by elk, and favored increased harvest quotas during the general hunting

season as the preferred method of addressing depredation. Damage hunts were viewed as an alternative if adequate harvest is not attained during the general hunting season. Many landowners feel that elk numbers are too high and should be reduced.

MANAGEMENT GOAL

Manage elk habitat in its most productive condition and provide maximum recreation opportunity. All DFWP management actions and recommendations concerning elk habitat will give equal consideration to habitat requirements of mule deer, white-tailed deer, sharptails and sage grouse.

HABITAT OBJECTIVE

Develop cooperative programs that encourage public and private land managers to maintain 1.83 million acres of productive elk habitat and increase the amount of suitable elk habitat in the EMU.

HABITAT MANAGEMENT STRATEGIES

DFWP will:

- Work with land management agencies and private landowners toward establishment of cooperative rest-rotation grazing management systems on lands managed by CMR, BLM and private landowners.
- Work with BLM, CMR and private landowners toward establishment of a cooperative fire management agreement designed to enhance range conditions. The agreement would identify important wintering areas for mule deer and other species, which would be protected.
- Coordinate with BLM, CMR and private landowners to implement a cooperative road management program designed to curtail off-road travel and designate walk-in hunting areas to maximize elk security.
- Work with BLM and private landowners to develop a cooperative timber management plan that recognizes cover requirements of elk.

POPULATION OBJECTIVES

- 1) Maintain the elk population at its current level (2,700).
- 2) Maintain an observed late-winter bull:cow ratio of 20 per 100.
- 3) Maintain a late-winter calf:cow ratio of 40 per 100.
- 4) Maintain an annual harvest of 225-300 antlered and 250-350 antlerless elk.

- 5) Provide 13,000 days of hunting recreation annually for a total of 300-500 rifle hunters and 3,000 archery hunters.

POPULATION MANAGEMENT STRATEGY

The potential for any future increase in elk numbers on the CMR is contingent upon increased landowner tolerance for elk numbers and reduced elk depredation on privately owned lands adjacent to the CMR. Existing levels of game damage and current landowner tolerance for elk preclude an elk population increase in this unit at this time.

Regulations: Current regulations include the general archery and rifle seasons with antlerless and either-sex permits allocated by hunting district. The general archery season will be maintained except for HDs 621, 622, 623, 631, 632 and 680, which are permit-only due to low elk security.

GAME DAMAGE STRATEGIES

Landowner tolerance for elk and game damage potential are largely determined by the extent of timbered breaks and riparian areas and their location relative to private agricultural lands. Elk movement during droughts or during hunting season have less negative impacts in HDs 410 and 700 than in the 600 hunting districts. As elk populations expand their range south of the Missouri River, the potential for conflict will increase. Management strategies to be implemented by DFWP include:

- Manage elk populations through hunter harvest during the general hunting season.
- Coordinate with CMR and private landowners to plant lure crops in suitable locations to help eliminate depredation on agricultural crops. Lure crops should be planted on old croplands, most of which currently feature crested wheatgrass or noxious weeds. Conversion of native vegetation to lure crops should be avoided.
- Coordinate with CMR in responding to game damage complaints and mitigating chronic game damage problems. The most critical areas for a cooperative approach include: Sun Prairie Flats (during drought years); crop fields on the Burke and Handley Ranches (most years); alfalfa bottoms on the Matovich Ranch (most years); the Shores and Hart Ranches (where hunter access is limited or unavailable); Armells Creek area, and cereal grain fields near Winifred.

ACCESS STRATEGIES (to maintain hunting access at current levels):

Future changes in land ownership may adversely affect hunting access in this unit. Access strategies include:

- Coordination with BLM, CMR, private landowners and the public to develop and implement a cooperative road management program to curtail off-road travel, and designation of walk-in hunting areas, where appropriate, to enhance elk security.

- Identification and ranking of problem areas where access could be improved through implementation of block management agreements or the securing of easements (e.g., the area west of Timber Creek in HD 622, where future access conflicts between hunters and outfitters are anticipated).

REFERENCE SECTION

KEY TO ACRONYMS

AMP	Allotment Management Plan: A document that specifies the actions to be taken to manage and protect the rangeland resources and reach a given set of objectives. The U.S. Forest Service defines an allotment as: A designated area of land available for livestock grazing.
A-7	A-7 License: A special type of license available only through the annual special drawing that allows the holder to harvest an antlerless elk in the district for which the license is valid. The holder can only hunt in the designated hunting district and may not hunt elk anywhere else in the state during the license year. A-7 licenses are available in only a limited number of areas and in general, are issued for areas where there are no other opportunities to harvest antlerless elk.
BAB	Branch-Antlered Bull: Any elk having an antler or antlers with a visible branching from the main beam at least four inches long. This definition includes yearling bulls with a branch four inches or greater at the top of the main antler beam. BAB hunting regulations were discontinued in 1989 and replaced by BTB regulations in 1990.
BLM	Bureau of Land Management, U.S. Department of Interior
BMW	Bob Marshall Wilderness Complex
BTB	Brow-Tined Bull: Any elk having an antler or antlers with a visible point on the lower half of either main beam that is at least four inches long. This definition includes only bulls that are 2 1/2 years or older. Beginning in 1990, BTB hunting regulations replaced BAB regulations to prevent harvest of yearling bulls with branched antlers.
CMR	Charles M. Russell Wildlife Refuge, administered by the U.S. Fish and Wildlife Service.
DFWP	Montana Department of Fish, Wildlife and Parks
DSL	Montana Department of State Lands
EA	Environmental Assessment
EMU	Elk Management Unit: An area of land that comprises one or more hunting districts with similar ecological characteristics and which encompass herd ranges of major elk populations associated with that EMU. DFWP has delineated 35 EMUs in the state.

ES	Either-sex: A hunting season regulation that allows a hunter to legally harvest either a male or a female animal using an A-tag.
GIS	Geographical Information System: A computer based technology that facilitates storage and manipulation of data recorded in digital form and displays such information in map form. The value of GIS technology is that it enhances a person's capability to analyze large volumes of data and to identify spatial relationships between various kinds of information.
HD	Hunting District: A contiguous geographical area delineated by DFWP for population management purposes (including application of hunting season regulations). Hunting district boundaries are illustrated and described in the annual big game hunting regulations published by DFWP.
MA	Management Area: An area mapped in the forest plan to which one or more management prescriptions are applied. The U.S. Forest Service defines a management prescription as: A composite of the specific multiple use direction applicable to all or part of a management area that generally includes but is not limited to goals, objectives, standards and guidelines, and probable management practices.
RMP	Resource Management Plan: A land use plan produced by the Bureau of Land Management as prescribed by the Federal Land Policy and Management Act (FLPMA). The plan sets forth the decisions, terms and conditions for management of the public land resources. It serves as the basis for future resource actions and budget proposals.
USFWS	United States Fish and Wildlife Service, Department of Interior
USFS	United States Forest Service, Department of Agriculture
WMA	Wildlife Management Area: A parcel of land administered by DFWP for the benefit of wildlife populations.
YNP	Yellowstone National Park

DEFINITIONS

ACCESS AND TRAVEL MANAGEMENT PLAN: That portion of the planning and implementation process that develops clear, specific direction on the appropriate levels of land, water and air access opportunities to be made available. (USFS Definition) An access and travel management plan takes into account long-term social, biological, economic and physical considerations; it combines a variety of design considerations that are commensurate with how access will be provided and travel will be managed; and it also involves sharing this information with concerned publics.

BLOCK MANAGEMENT: An agreement between DFWP and a private landowner whereby the landowner grants free public hunting access in return for reimbursement for the time the landowner spends managing hunters. Reimbursement can be in the form of cash for services rendered during the hunting season or employment of a third party to perform those services. The block management program is funded by hunting license dollars.

BRANCH-ANTLERED BULL (BAB): Any elk having an antler or antlers with a visible branching at least four inches in length from the main antler. This designation includes all mature bulls and some yearling bulls.

BROW-TINED BULL (BTB): Any elk having an antler or antlers with a visible branching on the lower half of either main antler that is at least four inches in length. This designation includes all bulls that are 2 1/2 years of age or older.

*** CALVING AREAS:** Any area between winter range and summer range where cows give birth to calves. May be a specific area where a majority of calving for a herd takes place or scattered locations throughout the range of that herd.

*** CUMULATIVE EFFECTS/IMPACTS:** The additive effects/impacts of a number of unrelated, or related but discrete, developments or management activities that have taken place in a given area.

ELK MANAGEMENT UNIT: A geographic area encompassing one or more hunting districts that exhibit a collective similarity in ecological characteristics and in most cases, includes the yearlong range of the area's major elk population(s). Elk management units were delineated by DFWP for the purpose of formulating management goals and objectives for this statewide elk management plan.

*** ESCAPE COVER:** Vegetation dense enough to aid animals in escaping from potential enemies or avoid disturbance.

*** ELK VULNERABILITY:** A measure of elk susceptibility to being killed during hunting season. This is the antonym of security during the hunting season. Influenced by elk security levels, hunter numbers/densities, hunter behavior, elk behavior, etc.

HABITAT: The land base that provides the life needs of a species, population or individual. Habitat encompasses food, water, shelter, living space and security, the required attributes and interspersion of these habitat components being unique for every species of wildlife. Habitat requirements may also vary according to season, life stage and/or sex.

* **HIDING COVER:**

Structural definition: Vegetation capable of hiding 90 percent of a standing adult elk from human view at a distance equal to or less than 200 feet. As a site-specific vegetative component of security, the quality of hiding cover varies inversely with sight distance. Topographic relief, as it affects line of sight and sight distance, influences the adequacy of hiding cover to obscure an elk from human view or other sources of disturbance.

Functional definition: Hiding cover allows elk to use areas for bedding, foraging, thermal relief, wallowing and other functions yearlong. Hiding cover may contribute to security at any time, but it does not necessarily provide security during hunting season.

HUNTER HARVEST SURVEY: A telephone survey of purchasers of Montana hunting licenses (resident and nonresident), conducted by DFWP on an annual basis. Questions are designed to determine sex and age composition of the harvest, total number of animals harvested, numbers of hunters afield, number of days of hunting recreation provided, hunter success and distribution of harvest during the hunting season.

HUNTING EXPERIENCE: Refer to definition of "recreational experience" as it pertains to hunting recreation.

HUNTING OPPORTUNITY: A combination of circumstances and options that makes the experience of hunting readily available. Opportunity is commensurate with the ability of an individual to participate and to choose situations that are personally rewarding.

* **MIGRATION CORRIDOR:** Circumstances, usually linked to topography and vegetation, that provide a completely or partially suitable habitat (or series of habitats) that animals travel through during seasonal migrations.

RECREATIONAL EXPERIENCE: An individual, qualitative judgment based on the type, character and condition of habitat, scenic values, accessibility, number of other people in the area, size and age structure of the elk population, presence of other wildlife populations, hunting regulations, etc. Availability of a variety of circumstances maximizes an individual's opportunity to select the recreational conditions that are most personally rewarding. (Refer to key to recreation types on page 163 and summary table on pages 164 - 169.)

The following five recreation types are qualitative expressions that impart a broad characterization of the recreational experience(s) each hunting district can provide, based on human impacts to the landscape and accessibility:

- 1) Wilderness recreation: characterized by expansive areas of undeveloped country that may comprise hundreds of thousands of acres and lack of road access and which may or may not be federally protected under the Wilderness Act. Use of pack animals is prevalent and recreationists frequently camp in the area for extended periods of time.
- 2) Backcountry recreation: characterized by tracts of undeveloped country comprising tens of thousands of acres and lack of road access. Compared to the wilderness experience, recreationists may be more mobile, less equipped for large camps or extended stays and able to travel in or out of the area more easily and in less time. Use of pack animals and backpacking are common.
- 3) Minimum motorized access: recreationists may access the area by vehicle and then walk or bike on trails or closed roads to reach tracts of unroaded or undeveloped country comprising 5 - 10,000 acres. Recreationists can expect to encounter evidence of commercial resource development in the form of roads and logging activity. Day trips are prevalent and camps are often not far from vehicles parked on access roads. Use of pack animals is minimal, associated primarily with game retrieval.
- 4) Moderate to high levels of motorized access: characterized by limited stretches or "stringers" of undeveloped land located between roads. Most excursions are of short duration, such as morning or evening hunts. Use of pack animals is uncommon but four-wheel-drive vehicles, motorcycles and all-terrain vehicles are commonly used. Camping is not a common feature of this kind of hunting experience as many hunters drive to hunting areas each day.
- 5) Heavily roaded: characterized by high road densities and abundant evidence of commercial resource development and/or tracts of land that are open, flat and easily traversed by motorized vehicles. Restrictions on motorized access may be in place with walk-in areas comprising tracts of 5 - 10,000 acres. Excursions are of short duration, with most hunters driving to hunting areas each day. Few people camp in these areas.

- * SECURITY: The protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with hunting season or other activities. The components of security may include, but are not limited to, vegetation, topography, areal extent, road density, distance from roads, size of vegetation blocks, hunter density, season timing and land ownership.
- * SECURITY AREA: Any area which, because of its geography, topography, vegetation, remoteness or any combination thereof, will hold elk during periods of stress.

Structural definition: The components of security may include, but are not limited to vegetation, topography, size and extent, road density, distance from roads, size of vegetation blocks, hunter density, season timing, and land ownership.

SPIKE BULL: Any elk having antlers that do not branch, or if branched, branch is less than four inches long (measured from the main antler beam).

* **THERMAL COVER:**

Structural definition: For elk, a stand of coniferous trees 40 feet tall or taller with an average crown closure of 70 percent or more. In some cases, topography or vegetation less than specified may meet animal needs for thermal regulation.

Functional definition: Circumstances, usually related to vegetation structure, used by animals to ameliorate effects of weather.

* **TRANSITIONAL RANGE:** Areas on which elk concentrate during spring and/or fall. Transitional ranges are generally adjacent to winter ranges and may provide important security during fall. May include migration corridors.

TRAVEL CORRIDOR: Terrain linking important elk use areas, through which elk must pass to move from one use area to another (e.g., between resting and feeding areas). The term "travel corridor" is generally applied more broadly than the term "migration corridor" and connotes daily or periodic movements that are neither of the magnitude or seasonal nature that connote "migration".

* **WINTER RANGE:** The area, usually at lower elevations, used by elk during the winter months.

* Terms defined by the Elk Vulnerability Working Group, composed of wildlife professionals representing state (Montana and Idaho), federal, university and private management concerns.

EXPLANATION OF TERMINOLOGY REFERRING TO HUNTING SEASON FORMATS AND REGULATIONS

HUNTING SEASON FORMATS

Archery-Only: The five- or six-week hunting period extending from early September into October. This season is open to either-sex hunting, with certain exceptions outlined in the archery regulations. During the archery-only season, only a long bow, recurve bow or compound bow may be used.

General Season: The five-week hunting period following the archery-only season, extending from mid- to late-October through mid- to late-November. The objectives of the general hunting season are to manage wildlife populations and provide hunting recreation to the public.

Early/Late Seasons: Special hunting seasons scheduled prior to or following the five-week general season with the objective of managing wildlife populations (with the exception of early backcountry hunts, for which recreational opportunity is the primary objective). Recreation as a primary management objective applies only until December 1.

HUNTING SEASON REGULATIONS

Any-Bull: Any elk having an antler or antlers at least four inches long can be legally harvested. This season format is contingent on elk security values high enough to maintain an adequate number of bulls through the hunting season. Therefore, this season type is not suitable for areas of low elk security. The any-bull regulation maximizes the opportunity for licensed elk hunters to select a hunting location and choose the bull they wish to harvest. Hunting pressure is distributed among all bull age classes.

Antlerless: Any female or juvenile male with antlers less than four inches long may be legally harvested. Antlerless seasons are either of limited duration or regulated through use of antlerless permits. Hunters issued a permit to hunt antlerless elk during all or any portion of the general season are restricted to hunting and taking only an antlerless elk in the area where the permit is valid. Permit holders are entitled to general season hunting privileges in all other elk hunting districts except for districts restricted to "hunting by permit only". Availability of antlerless permits has the effect of reducing harvest pressure on bulls in the hunting district for which they are issued.

Either-Sex: Any adult or juvenile elk can be legally harvested. This season type is contingent on elk security adequate to prevent over-harvest. It provides maximum opportunity for hunters to choose where they wish to hunt and what type of elk to harvest. The opportunity for a hunter to take either a bull or a cow may reduce hunting pressure on the bulls.

BTB: Any elk having an antler or antlers with a visible point on the lower half of either main beam that is at least four inches long can be legally harvested. This regulation is generally implemented in low security areas where inadequate numbers of mature bulls survive the hunting season under an any-bull regulation. The BTB regulation protects bulls until their third fall so they can breed as 2 1/2-year-olds. Because this regulation provides legal protection for yearling bulls, it has the effect of concentrating hunting pressure on mature bulls. Rather than increase the number of bigger bulls in the population, the end result of this season format is that bulls are harvested at age 2 1/2, rather than 1 1/2 (spikes). While the BTB regulation does not limit the hunter's choice of where to hunt, it does restrict hunters to harvesting only BTBs and reduces the total bull harvest.

Spike/BTB by Permit: Spike bulls may be legally harvested by any hunter, but BTBs may be legally harvested only by a limited number of BTB permit holders. This season regulation is designed to maintain a complement of older bulls in the population by placing restrictions on the harvest of older bulls. Hunting opportunity under this regulation is keyed to unrestricted hunting for spikes, offset by limited hunting opportunity for older bulls. For this season type to work, a reasonable carry-over of yearling bulls must be assured.

Permit-Only: This regulation controls elk harvest by regulating hunter numbers. In order to participate in a permit-only hunt, a license holder must also have a special permit (issued through the annual special drawing), that specifies a hunting district and the age/sex of elk for which a hunting license is valid. This season type greatly reduces hunter opportunity by reducing hunter participation, restricting hunters as to where they can hunt and restricting the age/sex of elk they can harvest.

Quota: A harvest quota may be applied to any segment of the elk population (based on age, sex or total numbers), with some mechanism in place to guarantee that the harvest of every animal is reported. Upon attainment of the harvest quota for a particular area, the hunting season is closed by order of the Fish, Wildlife and Parks Commission.

Antler Point Restrictions (4-pt., 6-pt., spike, etc.): Antler point restrictions are intended to maintain a diversity of age classes within the bull segment of the population. Antler point restrictions target just one age class, or group of age classes for harvest, protecting the other age classes. This regulation increases hunting pressure on the targeted age class(es). While the opportunity to hunt is maintained, harvest is restricted to specified bull age class(es) and the total bull harvest is reduced. Illegal bull harvest is often a problem that accompanies antler point regulations.

A-7 Antlerless License: The holder of an A-7 elk license is limited to hunting only antlerless elk, within a designated area, during a specified time period. The holder of an A-7 license must forfeit his/her opportunity to hunt elk anywhere else in the state for the duration of the general elk hunting season. A-7 licenses are generally designated for use on private lands. Criteria used by the Fish, Wildlife and Parks Commission in issuing A-7s include: 1) High hunter success; 2) availability of hunting access to private lands where elk are located, and 3) availability of public hunting access without charge.

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SUMMARY:

ISSUES RAISED DURING PUBLIC REVIEW OF THE 7/91 DRAFT ELK PLAN

6,000 copies of the draft elk plan were printed in July, 1991. Over 4,000 copies were distributed by mail and the remainder were made available upon request at all DFWP offices and distributed at public meetings. The original 6 week comment period was extended to 10 weeks (August 1 - October 15), during which time the DFWP received about 480 letters and telephone calls. Public comments were recorded in a "listening log" format and served as a basis for revisions to the draft plan. Following is a summary of public comment on the statewide portion of the plan. Notations in parentheses reference incorporation of the comment or issue in the final plan; an answer to the question raised, or other DFWP response.

POLICY ISSUES pertaining to DFWP operations and the existing wildlife program:

- Requests that DFWP take a stand on wolf reintroduction and manage wolf numbers.
(Statement on pg 13 reflects limits of DFWP authority.)
- Too many outfitters: need for regulation of outfitter numbers.
(Would require legislative action, pg 12.)
- Game farming poses disease risks to wildlife populations: better regulation of game farms is needed.
(New game farm rules were jointly adopted by DFWP and D. of Livestock on May 15, 1992 - pg 12.)
- DFWP should counter the anti-hunting movement, to include preparation of a "hunting EIS".
(Commitment to Montana's hunting heritage is stated in the DFWP mission, pg 4. A programmatic EIS for the state's wildlife management program - including hunting harvest - is in progress and is scheduled to be completed in 1994.)
- Hunters should not subsidize management of late hunts on lands that are closed to public hunting during the regular hunting season.
(Criteria for scheduled late hunts outlined on pgs 17 and 18.)
- DFWP should compensate landowners for forage consumed by elk.
(Would require legislative action)
- Pros and cons of changing the timing of the hunting season (moving the opening date one or two weeks earlier).
(Public scoping of this issue by the Fish, Wildlife and Parks Commission in October, 1991 indicated strong opposition to such a change at this time.)
- Opposition to government condemnation of land to secure public access (centered in the Emigrant and Gallatin EMUs).
(Language on pg 15 indicates that landowners entering into leases, conservation easements or fee title acquisition must be willing parties. Some people may have erroneously construed conservation easements or fee title acquisition as condemnation procedures. Concern regarding government condemnation is probably rooted in recent USFS acquisition of access points in the Upper Yellowstone through federal condemnation procedures.)

- The elk plan should address emergency situations such as severe drought or severe winter weather during hunting season.
(The Fish, Wildlife and Parks Commission has the authority to enact emergency actions in response to emergency circumstances, pg. 3.)
- Perception that the elk plan will be detrimental to other species, both game and nongame.
(Context with management of other species on pg. 12.)
- Questions about the roles/responsibilities of land managers versus wildlife managers.
(Roles of agencies clarified on pg. 7.)
- Concerns about the archery hunting season, including: It disturbs the rut and lowers reproductive success; bulls are too vulnerable during the rut; opposition to electronic archery apparatus; there is too much wounding; too many bulls are taken and/or wounded; meat is spoiled and wasted during warm weather conditions.
- Need for more communication and coordination among state and federal agencies, especially with regard to elk habitat issues.
- Concern about the effects of off-reservation hunting by native Americans on the state's elk populations.
- More attention should be directed to controlling poaching.
- Concern about how increasing resident hunter numbers can be accommodated.
- DFWP personnel should listen more to local people with knowledge and on-the-ground experience.
- Wildlife management should not be so political.
- Road closures must apply to everyone - no exceptions.
- DFWP definition of "disabled" is too broad.
- Handicap hunting should be better addressed.
- Support for more block management.
- Support for DFWP position on artificial feeding.

HABITAT ISSUES

- Weed control: Whose responsibility is it?; Suggestion that DFWP should be the responsible agency.
(DFWP does address weed management on the lands it administers. Weed control measures are outlined in WMA management plans.)
- DFWP should devote more emphasis to long-term, rather than short term, vegetation management.
(Habitat strategies are prefaced by the dynamics of habitat conditions, pg. 4.)
- Need for improved winter range conditions and winter security, including protection from disturbance by snowmobile and cross-country skiing recreation.
(Establishment of snowmobile routes and ski trails is addressed in the USFS access and travel management planning process - pg. 15 and 150.)
- Issue of elk security. Comments included: Elk security should receive more emphasis; elk security concerns will constrain multiple use; elk security is unnecessary, and concern about validity and application of the Clark Fork elk security model.
(Elk security is defined on pg. 152; the role of elk security in providing recreational opportunity is explained on pgs. 8-9.)
- Opinion that/ thermal cover is not important to elk.

- Opinion that/ thermal cover is not important to elk.
(Relationship between thermal cover requirements and forage availability clarified on pg 6.)
- Both support and opposition for the plan's emphasis on management of elk habitats.
- Pros and cons of protection/acquisition of elk habitat by DFWP: Some want less and some want more.
- Pros and cons of HB 526 (DFWP acquisition of leases, conservation easements or fee title to protect wildlife habitat). Suggestions included: The fund for habitat protection should be capped; everyone should contribute (not just nonresidents and purchasers of the sportsman license); and HB 526 should be a higher priority in the wildlife program.
- Concern that the elk plan will prompt grazing reductions on public lands.
- Perception that the elk plan is uncompromising with regard to logging; that logging could/should be used to replace the role that fire has played in the past; and managed vegetation will be better for elk in the long term than vegetation subject to ups and downs of natural processes.
- The public needs information concerning the reasons for road closures and the effects of road closures on elk habitat use and elk hunting opportunity.
- More road closures are needed, as well as more regulation of trail bikes, ATVs and in some cases, horses, to protect elk security.
- Opinion that the plan places too much emphasis on the importance of Wilderness and roadless areas to elk.
- View that road closures to protect elk security are unwarranted.
- Pros and cons of sagebrush removal.
- Support for rest-rotation grazing systems.

POPULATION MANAGEMENT ISSUES

- There could/should be elk in more places in the state.
(Language added to population objective #1 on pgs. 16 and 17.)
- Pros and cons of stated elk population objectives: comments ranged from "too low" to "too high."
(Context of statewide population objective clarified on pgs. 16 and 17.)
- What is the distinction between recreational hunting (such as early backcountry hunts) and management hunts (general hunting season)?
("Management hunts" are geared to accomplish adequate harvest to manage population size and distribution, requiring harvest of the antlerless population segment. Management hunts include some late seasons as well as the general hunting season. Early seasons featuring the opportunity to hunt bulls are considered strictly recreational because there is no need to harvest bulls at that time or place. Early bull hunts are a recreational opportunity can be maintained only under conditions of high security and low harvest, pg. 17.)
- Length of the hunting season: both support and opposition to shortening the season.
(Public ownership in the existing season format is acknowledged on pgs. 9 and 19.)
- What is the basis for the difference between the minimum cow/calf ratio west of the divide (20:100) versus east of the Divide (30:100)?

- (Although calf production is comparable on both sides of the Continental Divide, calf survival/recruitment is better on the east side due to more favorable wintering conditions, including forage quality and availability.)
- More emphasis should be given to providing elk viewing recreation.
(Additional recreation objective No. 5 added on pg 19.)
- Opinion that elk hunting opportunity is directly proportional to elk population numbers - - (discounting the role of hunter numbers and other factors that determine elk security).
(Refer to section on elk vulnerability pgs. 7 - 9 and definition of elk hunting opportunity on pg 150.)
- Concern that the minimum 5/100 bull:cow ratio is too low.
(The difference between "actual" and "observed" bull/cow ratios is clarified on pg 18.)
- Belief that existing levels of game damage could be reduced substantially through increased numbers of antlerless permits and/or more either-sex hunting during the general season.
- Belief that current elk numbers are a direct result of timber harvest and other resource developments and that the elk plan should therefore be more accommodating to the timber industry.
- Input regarding season regulations spanned the gamut heard by the Fish, Wildlife and Parks Commission during the annual season-setting process.
- Pros and cons of trophy bull management: some feel it is overemphasized and some feel it is underemphasized in the plan.
- Belief that more restrictive regulations are needed to provide more protection to bull elk.
- Suggested strategies for bull management. Suggestions included: BTB regulation; limit the number of hunters; and a waiting period for hunters who are successful in taking a bull.
- Opinion that stated EMU population estimates are conservative/underestimated.
- Opposition to late hunting seasons.

SOCIAL ISSUES

- Opinion that use of A-7 licenses should be tied to reasonable public access during the general hunting season.
(Refer to criteria for issuing A-7 licenses, pg. 155.)
- Opposition to late damage seasons on lands where public hunting is not allowed during the regular season.
(Refer to criteria for scheduled late hunts, pgs. 17 and 18.)
- Belief that DFWP should only manage elk - not people.
(Section on elk vulnerability, pgs. 7 - 9 explains the role of "people management" in management of elk populations and elk-related recreation.)
- Pros and cons of road closures/travel restrictions. Comments in opposition included: road closures are contrary to our rights as Americans; concern that road closures impede multiple use of public lands; road closures have no bearing on elk security, and road closures constrain handicapped and older people. Comments in support included: more road closures should be implemented for elk security; access and travel plans are needed, and more regulation is needed for trail bikes and 3- and 4-wheeled ATVs.

(New section on elk vulnerability on pgs. 7 - 9 discusses role of road/access management in elk management.)

- Concern that habitat strategies referring to conservation easements, leases or acquisition of fee title involve state or federal powers of condemnation that would infringe on landowner rights.
 - (All references to conservation easements and fee title acquisition in the elk plan would involve only willing parties.)
- Landowners should have more control over elk on their lands; some elk licenses should be issued directly to landowners.
 - (Would require legislative action.)
- The elk plan must recognize landowner rights.
 - (Recognition of landowner rights on pg 23.)
- Pros and cons of expanded hunting access, including: The need to accommodate needs of disabled and aged hunters; existing levels of hunting access are adequate (emphasized in Emigrant EMU), and elk need to be protected from additional access that would reduce elk security.
- View that population control measures should not be called "hunts" because animals are vulnerable and in poor shape at that time of year.
- Since most people view elk from vehicles, road closures inhibit viewing opportunity.
- Concern that outfitters and out-of-state hunters receive preferential treatment by DFWP.
- Providing public recreation is not an obligation of the landowner.

RELATIONSHIP TO MANAGEMENT OF OTHER RESOURCES

- Concern that the elk plan will reduce timber allocation on national forest lands.
- Concern that the elk plan will result in grazing reductions on public lands and that ranchers should not be required to reduce AUMs to accommodate elk.
 - (The elk plan does not call for AUM reductions. USFS personnel indicate that recently proposed AUM reductions have been prompted by degradation of riparian habitats by domestic livestock.)
- Concern that the elk plan will constrain multiple use on public lands.
- What is the relationship between the elk plan and forest plans?
- The elk plan should put more emphasis on non-consumptive wildlife recreation including viewing and photography.

Concern about the influence of the elk plan on other resource uses and local economies was especially evident in the Libby area. Also evident was a general lack of understanding of the respective roles of state and federal agencies and the relationship between the elk plan and forest plans. The section on elk vulnerability (pgs. 7 - 9) was added in response to a clear need for clarification and information. Discrepancies between the elk plan and individual forest plans will be resolved by staff people at the forest (USFS) and region (DFWP) level during planning processes conducted by both agencies. Resolution of elk management issues will culminate in revision of the forest plan, EMU plans, or both, and development of cooperative management programs addressing elk habitats, elk populations and elk-related recreation.

THE PLANNING PROCESS

- The comment period was too short.
(The original six week comment period was extended, resulting in a ten week public comment period.)
- There was not enough notice that the elk plan was available for public review.
(In addition to an extensive mailing list of over 4,000 individuals and organizations, DFWP issued statewide press releases announcing availability of the draft plan for review and inviting public input.)
- The timeframe of the plan and a schedule for updates should be spelled out.
(Added on pg. 3.)
- An elk plan is not needed -- elk and/or hunters have been/are doing fine without it.
(Impetus for the elk plan is addressed on pg. 3.)
- Timing of the comment period was inconvenient.
- Appreciation for the opportunity to be involved and the opportunity to provide input.

OTHER ISSUES

- Opposition to Wilderness and maintenance of roadless areas (centered in Libby).
(Several EMUs contain recommendations that certain key elk security areas be maintained in their current unroaded condition. However, DFWP has no authority pertaining to the administration and management of unroaded public lands or federally designated wilderness areas.)
- Requests to list additional roadless areas that should remain unroaded to provide elk security.
(EMU plans referenced only the most critical - not all - important roadless elk security areas. Additional important roadless areas were not added.)
- The economics of the timber industry are ignored in the elk plan.
(The DFWP mission does not encompass the economics of the timber industry or any other industry. However, the planning processes of public land management agencies do take into consideration timber and other industry interests. Just as the timber industry provides input to the USFS planning process, the statewide elk plan will serve as DFWP input.)
- References to "public hunting" should not exclude fee hunting on private lands.
- Pros and cons of abolishing "preserve" status of the Sun River Preserve.
- Fear that Montanans are losing their rights in favor of "outsiders" and/or monied interests.
- DFWP should offer compensation to private and corporate landowners in return for concessions they make to implement the elk plan as written.

KEY TO RECREATION TYPES*

TYPE 1 <u>WILDERNESS</u>	TYPE 2 <u>BACKCOUNTRY</u>	TYPE 3 <u>M I N I M U M MOTORIZED ACCESS</u>	TYPE 4 <u>M O D - H I G H MOTORIZED ACCESS</u>	TYPE 5 <u>HEAVILY ROADED</u>
acreage of undeveloped country	100s of 1000s of acres	up to 5-10,000 acres	scattered fragments- small acreages	very little, if any
hunting areas accessible by road	no	yes	yes	yes
camping equipment/ provisions transported via:				
● pack animals	prevalent	common	uncommon	no
● backpack	yes	common	uncommon	no
● motorized vehicle	no	no	prevalent	yes
camping in the hunting area	yes	yes	uncommon	uncommon
length of stay	days to weeks	up to 10 days	several days	one day
				partial day to one day

Table 1. Proportion of hunting district in each of the following recreation categories.

<u>EMU/HDS</u>	<u>Type 1 Wilderness</u>	<u>Type 2 Backcountry</u>	<u>Type 3 Min. Motorized Access</u>	<u>Type 4 Mod. - High Motorized Access</u>	<u>Type 5 Heavily Roaded</u>
Bob Marshall	130	19	12	61	7
140	20	8	65	3	4
141	68	10	15	7	
150	100				
151	100				
280	80	20	10	35	
281		5			
282				50	100
285				50	50
413	50		50		
422	424	50	10	50	10
425			40	10	
427				100	100
428				100	
441				40	
442				50	
164					
North Swan/ Flathead Valley	132		21	22	57
170					100
North Fork				55	20
110		5	20		
Purcell	100	10		50	20
Salish	101			5	30
102				7	35
103				58	20

EMU/HDS	Wilderness	Percentage		
		Type 1	Type 2	Type 3
120	122	20	70	30
122	124	55	20	60
124			5	40
Bitterroot		50	10	10
240				40
260				100
Deer Lodge				
215		10	10	40
818				40
835				40
Flint Creek				
212		10	10	40
213				40
Garnet				
283		20	10	10
290				60
291				100
292				45
Lower Clk. Fk.				45
104		30	20	40
121		30	70	45
123		15	85	35
200		10	10	25
202				15
Ninemile				20
201		5	30	40
203				25
Rock Creek				10
204				5

EMU/HDS	Wilderness	Percentage			Percentage Type 5 Heavily Roaded
		Type 1	Type 2 Backcountry	Type 3 Min. Motorized	
210		10	10	10	40
216		10	10	10	40
261		20	10	10	60
Sapphire					
211	10	20	30	20	20
214	10	20	30	20	20
250	10	40	10	10	40
270	5	20	20	10	65
321	15	20	25	25	20
Big Belt					
892	5	10	10	40	45
446	30	30	40	40	
Bridger					
312	10	10	10	40	40
890				50	40
891				30	65
393				60	
166					
Emigrant					5
313				30	
316				10	
317				75	
Gallatin					
301				20	
310				100	
314				90	
Highland					
340	5				40

	<u>Percentage</u>	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Type 4</u>	<u>Type 5</u>	<u>Heavily Roaded</u>
<u>EMU/HDS</u>		<u>Wilderness</u>	<u>Backcountry</u>	<u>Min. Motorized</u>	<u>Mod. - High</u>		
850	10	10	10	40	40	50	50
870	10	10	10	40	40	50	50
Gravelly							
322	15	30	30	40	40	15	
323	20	30	30	30	30	20	
324	20	30	30	30	30	20	
325	10	30	30	40	40	20	
326	5	30	30	45	45	20	
327	20	30	30	30	30	20	
330	20	30	30	30	30	20	
Fleecer							
319	10	10	10	35	35		
341				40	40		
167							
Madison							
310	50	50	50				
311	10	10	10				
360	60	60	60				
361	15	15	15				
362	85	85	85				
Pioneer							
329	20	20	20	70	70	10	
331	60	60	60	40	40	30	
332	60	60	60	40	40	30	
Tobacco Root							
320	20	20	20	40	40	30	10
333							10
Tendoy							
300	20	20	20	70	70	80	
302	10	10	10	40	40	30	

EMU/HDS	Percentage			Percentage		
	Type 1 Wilderness	Type 2 Backcountry	Type 3 Min. Motorized	Type 4 Mod. - High	Type 5 Heavily Roaded	
839	10	10	10	40	40	
843				30	40	
Absaroka						
520	70	70	15			
560			30			
Crazy Mountains						
315	40	40	20			
580	20	70	10			
Snowy Mountains						
411	20	40	40			
412	10	50	30			
169	20	40	40			
511			5			
530			60			
590				35		
Bear Paws					100	
690	25	50	25			
Missouri River						
Breaks						
410	50	20	20			
417		20	20			
426			40			
621				40		
622					100	
623					100	
631					100	
632					100	
680					100	
700					30	
						70

Table 2. Summary statistics for elk management units.

Name of EMU	Land Area (mi ²)	Current Estimate	Elk Population		Objective Hunter Numbers	Objective For Recreation Days	Elk Harvest		Elk Viewing Opportunity
			Elk	Population			Current	Objective	
Bob Marshall	6,250	9,000-11,000	9,000-11,000	12,000	42,000	1,900	2,000	35-45	*Su,W,Sp
N. Swn-Fifth.V.	300	200-250	250	200	1,000	20-30	110	170	Su,Sp
N. Fork	804	685	670	1,800	14,784	110	175	175	W,Sp
Purcell	1,400	1,100	1,400	2,000	15,000	175	400	400	Su,W,Sp
Salish	3,800	2,300	2,760	4,750	33,000	400	220	220	Su,W,Sp
Bitterroot	946	850-950	700-800	2,000	12,000	185	290	290	Su,W
Deer Lodge	999	2,350	2,050	4,100	28,100	550	700	700	W,Sp
Flint Cr.	794	1,400	1,400	1,300	9,562	260	1,170	1,170	Su,W,Sp
Garnet	1,517	3,000	3,000	5,200	33,000	776	300	300	Su,W,Sp
L. Clark Fk.	2,758	5,700	5,300	7,500	51,000	1,100	375	375	Su,W,Sp
Ninemile	1,055	2,000	2,000	3,700	20,000	300	500	500	Su,W
Rock Cr.	1,480	2,200	2,200	3,530	21,283	530	875	875	Su,W,Sp
Sapphire	2,692	3,500	3,300-3,800	6,900	47,500	975	550-650	550-650	Su
Big Belt	985	1,600-1,800	1,600-1,800	2,600-3,000	15,000	580-890	600-800	600-800	W,Sp
Brider	1,747	2,300-2,600	2,300-2,600	3,500	16,115	1,300-1,400	1,950-2,800	1,950-2,800	Su,W,Sp
Emigrant	990	3,800-5,000	5,000-6,000	5,900-6,300	16,000	1,025	950-1,150	950-1,150	Su,W,Sp,F
Gallatin	936	4,800-5,200	3,600-3,800	3,900	20,700	380	350-450	350-450	Su,W,Sp,F
Highland	1,100	1,600	1,500-1,700	3,000-3,500	17,000	1,400-1,800	1,700-2,000	1,700-2,000	W
Gravelly	1,800	7,000-7,500	8,000-8,500	6,300	34,700	350	450-550	450-550	Su,W,Sp,F
Fleecer	600	1,500	1,500-1,800	3,000-3,500	19,000	1,540-1,940	1,500-1,900	1,500-1,900	Su,W
Madison	1,368	6,500-7,000	5,300-5,800	4,600	23,700	600-800	700-1,150	700-1,150	W
Pioneer	2,040	3,000	2,700-3,200	4,500	35,000	775	950	950	Su,F
Tobacco Rt.	626	800-900	800-900	1,600	8,700	250-350	210-270	210-270	W
Tendoy	1,028	2,000	1,800-2,300	1,700	8,500	350	325-475	325-475	W
Elkhorn	1,220	2,000	2,000	2,800	18,000	400-500	450	450	Su,W,Sp,F
Dev. Kitchen	1,520	3,800	2,600-2,800	3,000	15,000	600-800	1,150	1,150	Su,W
Swigr. Hills	410	275	275	100	500	40	30-60	30-60	Su
Highwood	682	375-425	375-425	300	1,000	120	120	120	Su,W
Blt.-Cast.Mtns.	4,017	3,500	3,500	9,800	45,000	1,300	1,300	1,300	Su,W,Sp,F
Granite Butte	1,230	1,800	1,800-2,200	4,800	21,000	420	420	420	Su,W,Sp,F
Absaroka	1,963	1,700	1,700	1,500	7,700	175	300-400	300-400	Su,W
Crazy Mtns.	1,684	1,200-1,300	1,200-1,300	1,200	6,500	297	300	300	Su,F
Snowy Mtns.	7,068	1,070-1,300	1,000-1,300	500-700	2,800-3,750	147	15	15	200-260
Bear Paws	200	125	75	30	170	9	475-650	475-650	
Miss. R. Brks.	2,682	2,700	2,700	3,300-3,500	13,000	378			
EMU Totals	60,691	90,595	89,330	123,115	673,789	20,527	23,447	23,447	
1990 Hunter Harvest Survey Results				99,850	736,160	20,600			
1991 Hunter Harvest Survey Results				102,700	711,410	31,765			

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Hearing impaired recreationists may call the Montana Department of Fish, Wildlife and Parks telephone device for the deaf (TDD) at 406-444-1200.

The Montana Department of Fish, Wildlife and Parks wishes to thank Diane Haker, POB 14, Worden, Montana 59088 for use of her artwork on the cover and back of this document.



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graphics: Diana Haker



***Montana Department of
Fish, Wildlife & Parks***